

Doubting Thomases Scan the New Deal

Business grows increasingly sceptical
of its practicability, and uneasy over
its ultimate objectives

SINCE about the beginning of this year it has been increasingly apparent that the general public was getting uncertain about restoring prosperity by promoting scarcity. Experienced and thoughtful business men had had misgivings about this paradoxical program from its beginning. But, afflicted by their own depression troubles, and in the face of the ballyhoo support of NRA, they had got little hearing even when occasionally they had the temerity to voice their misgivings. Unthinking people had been swept along on the tide of booster propaganda. They were delighted with the idea of a national leadership daringly doing things, even if they were in doubt just what things it was doing. So for a time small attention was given to the experimental character of measures or to the failure to set up any definite goal at which these measures were aimed.

More recently, searching questions have been demanding answers. Have the recovery activities produced results proportionate to either their cost or to the hopefulness with which their initiation was greeted? Two inquiries as to the recovery program are lately being pressed:

First, will it work?

Second, do its authors conceive it as an end in itself, or merely as the beginning of a sweeping project of social reconstruction?

The first question is being answered with less and less confidence even by those who most wish

the answer to be affirmative. The second is asked with more and more misgiving by a constantly increasing number of people.

Not since 1896 has there been such interest in economic problems as there is today. People are reading more, thinking more, trying harder to synthesize and correlate the results of their reading, thinking and experience. And there is another possible parallel to 1896. A polling in August of that year would probably have swept the country for the program that in November was overwhelmingly beaten. Will the November of 1934 bring another testimony to the moderating influence of second thought?

THERE has been much discussion of whether the blue prints of our recovery plan were borrowed more from Italy or from Russia; and the answer has commonly been hesitant, because of doubt what the plan aims at. Being pretty sure that neither Britain nor Canada has tried anything savoring of either Facism or Communism, people are comparing their recovery accomplishments with our own—rather to the disparagement of our program. Britain and Canada have clung to the old ideals—tightening the belt, balancing the budget, insisting that economic law has not yet been repealed, keeping the Government out of business, and pay-as-you-go. On the face of returns to date, they have apparently done quite well. Canada

seems to have rather bettered our record in overcoming unemployment, while the British exchequer the other day reported a comfortable surplus in contrast to our vast deficit.

Small wonder, then, that the American community is beginning to inquire a little about the efficacy of our more flamboyant proceedings. We have poured out billions to prime the pump, and yet there are Thomases who doubt whether anything is coming out of the spout except a moiety of the priming water. Still more wonder whether the supply of priming water will hold out.

Out of these dubieties some things seem to be crystallizing in the public thought. There is less ready acceptance of Government in the role of a beneficent Providence able to ladle out magically accumulated funds for the deficits of business.

THERE is increasing reluctance to assume that politicians and political appointees are more competent to direct business than are the men who have given their lives to building it.

Price-fixing is being examined in the light of a hundred generations of experience, with the resultant conclusion that it works no better now than under the Roman emperors or the early Chinese dynasties.

Interrogation points are being written opposite proposals to feed people with wheat that other people are paid not to raise, or to clothe them with cotton that the planters are hired to plow under.

It begins to be recognized that instead of restricting production our need is to encourage it and then get its fruits consumed through wider

distribution of buying power in better wages and more employment.

There has been a healthy protest against spreading employment by reducing working hours. The argument that consuming power has never yet had a chance to prove what it can do for a truly prosperous community, is getting a serious hearing.

The original idea of the industrial codes was to provide more employment and better wages, and do away with child labor. These things would have brought higher prices, and then profits would take care of themselves. Unfortunately some people got the idea that the N.I.R.A. had repealed anti-trust laws, and undertook to chisel out monopolies for themselves. Some of them seriously believed that was what the recovery program wanted them to do; more of them simply saw the opportunity, and reached for it. Both groups were wrong. The anti-trust laws have not been repealed, and, plainly, are not going to be. Monopolies, whether established through the machinations of private business or under grants of Government privilege, are altogether bad; and the worst of them are those erected under color of Governmental approval. It makes no difference whether that approval is given through a royal charter or an NRA code.

The sooner we get back to accepting the simple fundamentals to which the codes were originally dedicated—more employment, better wages, better distribution of buying and consuming power—the sooner will we be back in the way of prosperity. And there are encouraging signs that with sober second thought the country is getting its feet into the safer paths.

U. S. Registrations of New Passenger Cars and Estimated Dollar Volume by Retail Price Classes

January 1934 and 1933 Compared

UNITS					ESTIMATED DOLLAR VOLUME				
	1934	1933	Per Cent of Total	Per Cent Change		1934	1933	Per Cent of Total	Per Cent Change
Chevrolet, Ford					Chevrolet, Ford				
Plymouth	42,730	54,687	69.81	68.66 -21.9	and Plymouth	\$25,500,000	\$30,900,000	58.50	55.87 -17.5
Others under \$750	6,110	12,052	10.00	15.16 -49.3	Others under \$750	4,200,000	7,800,000	9.63	14.10 -46.2
\$750-\$1,000	7,345	5,751	12.00	7.22 +27.6	\$750-\$1,000	6,000,000	5,000,000	13.75	9.05 +20.0
\$1,000-\$1,500	3,463	4,272	5.66	5.37 -19.0	\$1,000-\$1,500	4,100,000	5,000,000	9.40	9.05 -20.0
\$1,500-\$2,000	797	1,491	1.30	1.87 -46.5	\$1,500-\$2,000	1,400,000	2,600,000	3.21	4.70 -46.2
\$2,000-\$3,000	532	956	.87	1.20 -44.4	\$2,000-\$3,000	1,500,000	2,400,000	3.44	4.34 -37.5
\$3,000 and over	218	415	.36	.52 -47.5	\$3,000 and over	900,000	1,600,000	2.07	2.89 -43.8
Total	61,195	79,624	100.00	100.00 -23.1	Total	\$43,600,000	\$55,300,000	100.00	100.00 -21.1
Miscellaneous	47	197							
Total	61,242	79,821							

U. S. New Car Registrations and Estimated Dollar Volume by Manufacturing Groups

January 1934 and 1933 Compared

	Percentage of Total Units		Percentage of Total Estimated Dollar Volume	
	1934	1933	1934	1933
Chrysler Corp.	23.80	22.25	23.35	20.14
Ford and Lincoln	42.40	16.67	35.80	15.25
General Motors	21.42	49.75	24.50	49.36
All Others	12.38	11.33	16.35	15.25
	100.00	100.00	100.00	100.00

Industry Awaits Public Reaction to New Prices

LAST week's price increases demonstrated that the industry's repeated warnings that further additions to labor costs would have to be passed on to the consumer were not idle threats.

At the recent Washington conference of code authorities the N.A.C.C. stressed the fact that wage rates were fairly comparable with peak levels but prices were substantially lower, and that as a result "Profit margins have already been reduced to a point where further increases in cost must necessarily be passed on to the consumer."

A week later, W. S. Knudsen reiterated this conclusion when he told the National Labor Board: "At the present time and under existing conditions wages, we believe, cannot be raised without increasing prices."

With this viewpoint Henry Ford is in sharp disagreement, holding that "Higher wages are not an additional cost under proper management."

Giving effect to these contrasting attitudes, Mr. Ford stands pat on prices, despite the retoration of the \$5 minimum in his plants, while leading Chamber members announce moderately higher prices as the 10 per cent increase in wages recommended by President Roosevelt becomes effective.

Although Mr. Ford and the Chamber take diametrically opposite positions on the question of prices, both are concerned over the effect of higher prices on the current recovery in automobile sales. "When prices go up," Mr. Ford said last week, "business goes down." This statement echoes the fears which the Chamber voiced in Washington last month, when in opposing the NRA program of shorter hours with more pay it said: "It is impossible to over-emphasize the grave consequences that an increase in price may bring to both the workers and manufacturers as a result of reduced volume

and consequent unemployment."

The new price alignment should work to the advantage of the Ford company, at least insofar as unit sales are concerned. Whether it will prove so beneficial from the standpoint of earnings probably will hinge as much, if not more, on volume than on economies which Mr. Ford's manufacturing genius may enable him to effect.

Mr. Ford, of course, is in the unusual position of being both manager and owner of his company. He can stake his money on his conviction that the increased volume his company will get by standing pat on prices will yield maximum returns. The responsible executives of other car companies, however, are not in this position, as they are managing other people's money.

The unique managerial freedom which Mr. Ford has as proprietor of his far-flung enterprises may be inferred from the fluctuations in the surplus account of the Ford Motor Co., which is the only measure of the company's earnings available. Here is the record of the year-to-year changes:

Year	Approximate Production	Changes in Surplus Account (Indicated Earnings)	Per Car
1926	1,810,029	+\$75,270,895	+\$42
1927	454,601	-42,786,727	-94
1928	854,818	-72,221,498	-85
1929	1,951,092	+81,797,861	+42
1930	1,500,000	+44,460,823	+30
1931	750,000	-53,586,000	-72
1932	450,000	-74,861,644	-166
	7,770,540	-\$41,926,290	-\$5

Although changes in design, weight and equipment detract from the significance of direct price comparisons, it is of some interest here to compare Ford prices with those of his two chief competitors. Based on data from the Official Used Car

Prices vs. Wage Rates

Average of Chevrolet and Plymouth Sedan Prices per Lb.	1929 = 100	Average Hourly Earned Rate Paid by N.A.C.C. Members
100	1929	100
93	1930	100
89	1931	95
81	1932	84
77	1933	85
78	1934 (March)*	100
82	1934 (April)*	110

*March earned rates are based on N.A.C.C. estimate. April is March rate plus 10 per cent.

Guide, the record on four-door sedans is as follows:

	Chevrolet	Ford	Plymouth
1929	\$675	\$625	\$695
1930	675	600	625
1931	635	590	625
1932	590	590	635
1933	565	560	545
1934	645	585	585
1934 (April)	675	585	610

The 1934 sedans are all somewhat heavier than the comparable 1929 models. The Chevrolet sedan weight 3190 lb. now as compared with 2585 five years ago, while the Ford weight has increased from 2500 to 2675 and the Plymouth from 2510 to 2678. The effect on the price per pound of the year-to-year changes in weights and prices are reflected in the following table:

	Chevrolet*	Ford*	Plymouth*
1929	26.1¢	25.0¢	27.7¢
1930	25.8	24.4	24.4
1931	23.6	24.0	24.0
1932	21.4	23.2	23.2
1933	20.0	21.0	21.0
1934	20.2	21.9	21.9
1934 (April)	21.2	21.9	22.8

*Four-door sedans.

This table shows that even after the recent price increase the Chevrolet costs 4.9 cents less per lb. than in 1929 and 1.2 cents per lb. more than last year. The Ford costs 3.1 cents less per lb. than in 1929 but 0.9 cent per lb. more than last year. Plymouth prices are down 4.9 cents from 1929 on a per lb. basis and up 1.8 cents per lb. from last year.—D. B.

German Truck Makers S

**Air cooling gains as do gas generators and steam engines
—Streamlined buses introduced—Welded frames,
torque converters and high power, high speed
motorcoaches are other Berlin Show Features**

FURTHER displacement of gasoline by Diesel engines, the appearance of an automatic hydraulic torque converter, streamlining of inter-city buses, a new type of truck-loading device, and increased use of air-cooled engines for trucks and light delivery wagons were features of the commercial vehicle section of the Berlin Show, which came to an end on March 18.

In a small hall adjoining this section there were exhibits representative of the motor equipment of the German Railway Corporation and the German Post Office, which two institutions are the largest users of commercial motor vehicles in the country. The Post Office alone owns more than 13,500 such vehicles, and the railways are entirely reorganizing their various services, largely with a view to the more extensive use of motorized equipment. Of greatest interest to the automobile industry is that the express-goods service is being completely motorized, and thousands of trucks are being bought for this purpose. Through its subsidiary, the corporation building the super highway system, the Railway corporation also exerts a strong influence on design, for hundreds of trucks suitable for the heavy-duty

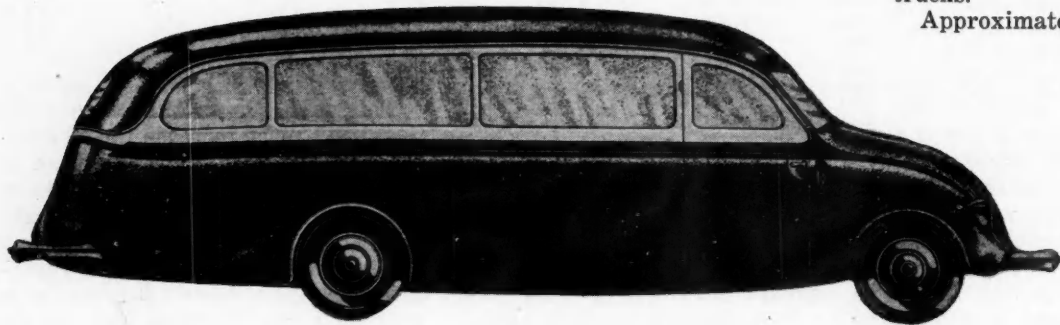
work of road construction will be needed.

The demand for trucks for road construction is undoubtedly one of the reasons why numerous six-wheelers were shown at Berlin again. This time most of them were of moderate load capacity, from 1½ to 4 tons. Some of these trucks carried road building machinery, such as concrete mixers. Rigid axles are used in the majority of these six-wheelers, the two rear axles carrying the frame through the intermediary of longitudinal leaf springs whose centers are trunnion-mounted on tubular cross members. The drive generally is by two sets of worm gears in tandem, with a short intermediate shaft between the two driving axles. In two Krupp six-wheelers each end of each driving axle connects to the frame through a triangular link. One corner of the triangle is pivoted to the frame side rail, the second corner carries the axle, while the third faces the corresponding corner of the link for the other axle. A small coil spring, forming the chassis-suspension member, is interposed between these two corners.

There was nothing strikingly new in the way of engines, but the gasoline engine has lost further ground

to the Diesel, and at the large stand of the M.A.N. there was not a single vehicle with the former type of engine. At the same time numerous new Diesel engines have made their appearance. Much work is now being done on engines of from 50 to 70 hp., suitable for the smaller commercial units. M.A.N. has abandoned its former policy of building six-cylinder engines only, and brought out a new four-cylinder engine of 60 hp., of the air-chamber type. Maybach Motor Mfg. Co. likewise has produced some small units, one being a three-cylinder design developing 60 hp. at 2000 r.p.m., the other a four-cylinder of 80 hp., both having direct mechanical injection. Humboldt-Deutz has added a four and a six-cylinder of the pre-combustion-chamber type, developing 50 and 75 hp. respectively. Krupp has introduced an air-cooled, horizontally-opposed, four-cylinder two-stroke engine of 70 b. hp. as a companion to the older 50 hp. four-stroke air-cooled Diesel engine. Henschel & Son have brought out a four-cylinder 60 hp. Lanova engine, while the South-German Brake Company, a subsidiary of the Mannheim Motor Works, has a new four-cylinder air-cell unit developing 50 hp. at 2000 r.p.m. This latter was specially designed as a conversion unit for Opel 3½-ton trucks.

Approximately 5000 trucks and

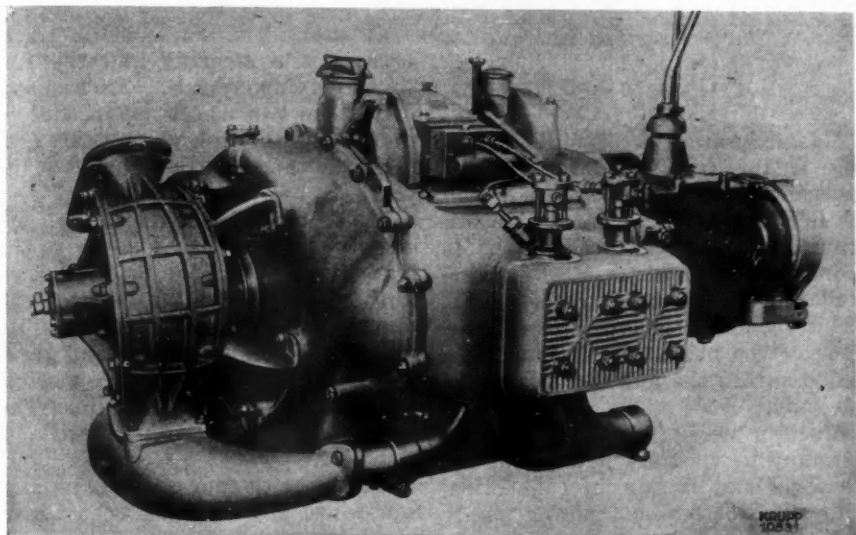


Krupp streamlined 28-passenger coach equipped with 65-hp. air-cooled gasoline engine and said to be capable of 62 m.p.h. Finish in burnished metal

ers Swing to Diesels

by Edwin P. A. Heinze,

Berlin Correspondent of Automotive Industries



Krupp 70 hp. air-cooled two-stroke Diesel engine, with scavenging pump on left

buses with Diesel engines were sold in Germany last year, and between 11,000 and 12,000 vehicles so equipped are now in operation here. A considerable business is being done converting gasoline trucks to the Diesel type. Junkers alone last year sold 300 Diesel engines as replacements for gasoline engines. Daimler-Benz, M.A.N., M.W.M. and others also were engaged in the business, and it seems that some 600 to 800 vehicles were converted to the Diesel type last year. It was probably the success of the conversion business

that induced so many firms to bring out smaller Diesel engines when there were already several on the market (Daimler-Benz, Buessing-N.A.G., Humboldt-Deutz).

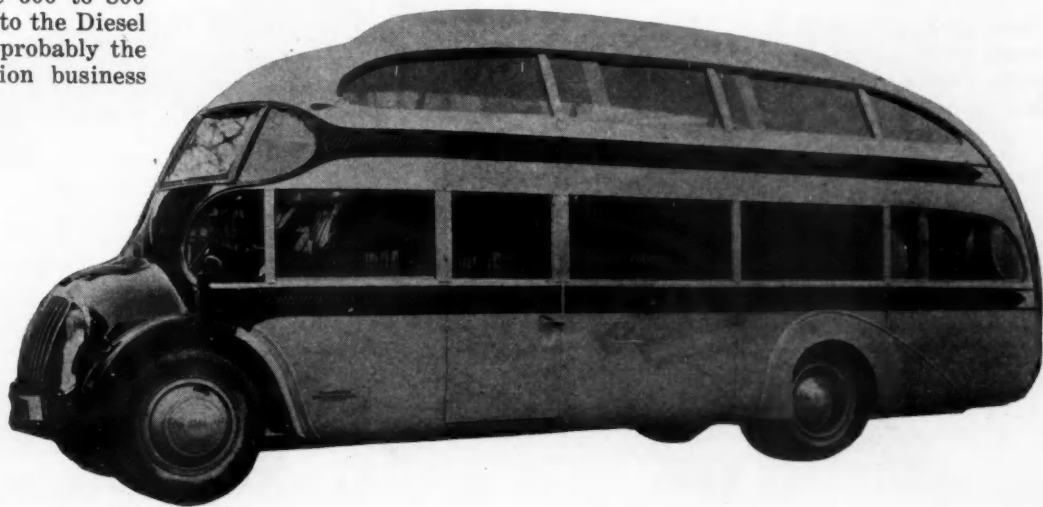
Another reason for the activity in this particular size of engine is that they are being used by the German Railways for switching locomotives. More than 750 of these loco-

motives, equipped with 60 hp. Diesel engines, are already in service, and some 2000 more will be required.

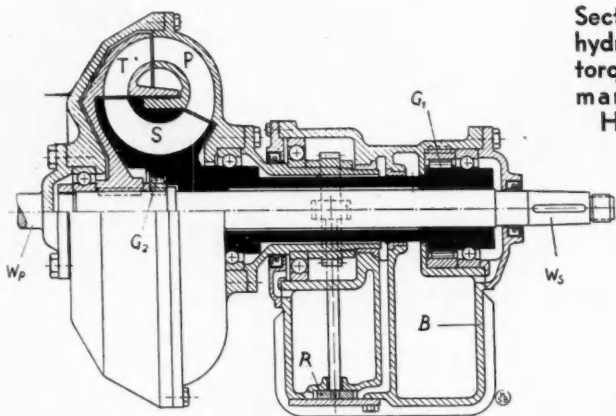
There has been much development also in larger high-speed Diesel engines, and this also has been encouraged by railway requirements, for not only the freight but also the passenger service of the German railways is undergoing a thorough reorganization. It is planned to replace many steam trains by railcars running on a more frequent schedule. For railcar purposes a number of new engines of from 150 to 800 hp. have been brought out, the latter being the rating of a six-cylinder M.A.N., which delivers this power at 1200 r.p.m.

Welded frames are gaining, and in addition to M.A.N., Magirus is using them. The writer understands, however, that purchasers view such frames rather skeptically, fearing that they will cause more expense and be less reliable.

The Klein, Schanzlin & Becker company of Frankenthal, Palatinate, has developed a fluid torque converter, manufacture of which has been undertaken by Henschel & Son. The device is a combination of the Foettinger clutch and torque converter and changes automatically from clutch to converter action. Referring to the sectional view shown



Streamlined inter-urban bus for 45 passengers with body by Lebindner - Ludewig-Ewen on an N.A.G. chassis with eight-cylinder V, 150-hp. engine



Sectional view of hydraulic automatic torque converter manufactured by Henschel & Son

herewith, P is the impeller; T, the turbine runner, and S, the guide blades. When the torque on runner T is greater than the engine torque, the blade wheel S tends to turn backward. To prevent such backward motion it is mounted on a hollow shaft provided with a free-wheeling unit G_1 at its end. When S begins to turn backward the free-wheeling unit locks and S then takes up the difference between impeller torque and runner torque. As soon as a balance of torques is established, wheel S tends to move forward with the impeller and runner, and it is prevented from over-running these by a second free-wheeling device G_2 at the forward end, which is then locked. Wheel S then acts also as a runner and adds its torque to that of runner T. The entire unit is supported by the housing B which contains extra fluid. A pump R in this housing constantly supplies fluid to the runner casing, in which it is kept under a slight static pressure. This torque converter already has passed through its tests, and a large unit for railcar use has been ordered by the South African Railways.

Gas generators are definitely coming to the fore in Germany, and several different systems were shown at Berlin, as equipment on buses, trucks and tractors. The Imbert is in most extensive use. Several installations showed rather neat mounting of the generator, which in some of the buses was entirely concealed within the left rear corner of the body.

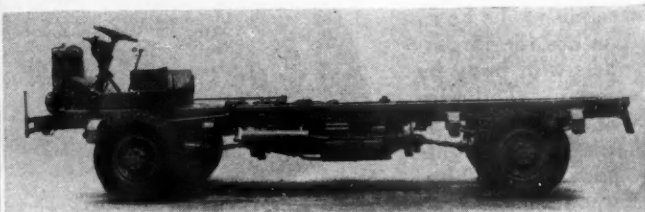
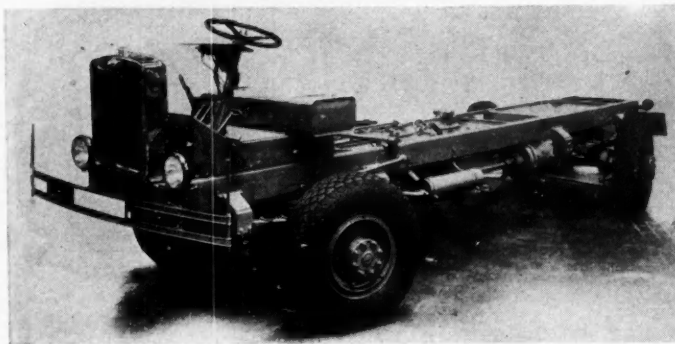
Much interest is being shown in Germany in the work being done by Henschel and Borsig in connection with the Doble steam power plant. The German Railways have five 5-ton trucks with Doble plants running, all built by Henschel, and in addition a number of railcars with this steam powerplant are undergoing tests. Private passenger cars with steam propulsion also are being demonstrated, and the German public seems to regard them with an open mind.

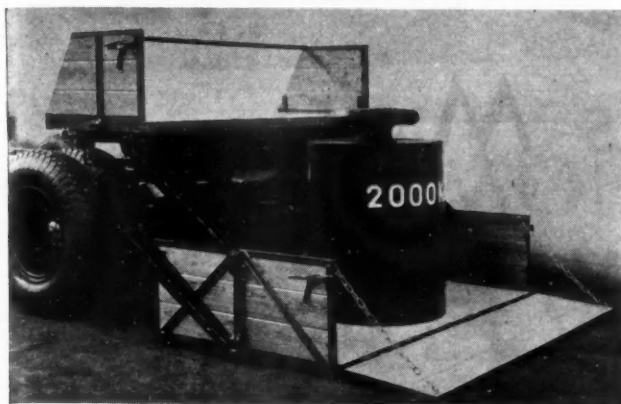
Very little success so far has attended the long drawn-out attempts

to introduce trolley buses or trackless trolley cars in Germany. Now a larger-scale installation is to be made in Berlin, where a long street car line required rebuilding. Automobile traffic on the particular route had so increased in volume that it would have been necessary to either transfer the street car line to a paralleling street or to widen the street. The best alternative was considered to be the trolley bus, and the M.A.N. firm developed for this service a six-wheeled bus equipped with two 55-kw. electric motors mounted on the sides of the frame between the steering and the forward driving wheels. Each motor drives the two wheels on its side of the chassis through worm gears connected in tandem. Suspension at the rear is by two longitudinal leaf springs, one above the other, the lower one being placed closer to the frame than the upper to leave room for the propeller shaft between the forward and rear drive gears. By this arrangement differential gears are dispensed with, and the electric motors are unusually accessible. The chassis has a carrying capacity of 11 tons.

A truck with four-wheel drive and four-wheel steering has been introduced by Hanomag. Its four-cylinder, ante-chamber-type Diesel engine is arranged horizontally on the frame, with the flywheel at the forward end. A conventional multiple-disk clutch and four-speed transmission is flanged on, and forward of this gearbox there is a transfer gear, from which a short propeller shaft runs to the front axle. This transfer gear drives a shaft extending alongside what would ordinarily

Three views of M.A.N. four-wheel drive, four-wheel steer truck chassis with horizontal four-cylinder engine under center of frame





Hydraulic loader on M.A.N. Diesel-engined 5-ton chassis. Articulated elevator platform on floor

be the sump, to a similar gear flanged to the rear end of the engine, from which another short propeller shaft runs to the rear axle. The transfer gears, propeller shafts and axles are identical. There are double universal joints at the steering pivots. For a curve of given radius the wheels need to be swung around only half as far as in a conventional vehicle, and steering this truck therefore requires no more effort than the conventional truck. Since the load is equally divided between front and rear axles, and in Germany the load is limited to $7\frac{1}{2}$ tons per axle, the carrying capacity is increased over that of the conventional design. Four-wheel drive is said to increase acceleration and pulling power, so that a heavy trailer can be hauled even in mountainous territory, while four-wheel steering assures a short turning radius.

Hanomag also exhibited a two-wheel-drive truck with the same engine arrangement, which in that case makes possible a shorter wheelbase and consequently a shorter turning radius for a given loading space. This model has been on the market for some time and is said to have found favor among haulers.

Several long-distance buses with very high-powered engines have been developed in Germany during recent years. Thus Henschel & Son supplied the German Post Office with a bus with a dual six 250 hp. engine, five-speed transmission, and overdrive, and Buessing-N.A.G. supplied the Saxon Motor Transport company with a similar bus equipped with 320 hp. engine. In the latter one of the two engines, mounted on the same crankcase, is provided with a free-wheeling unit so it can be cut out when not required. It seems, however, that this type of bus has not gained ground since first introduced some years ago.

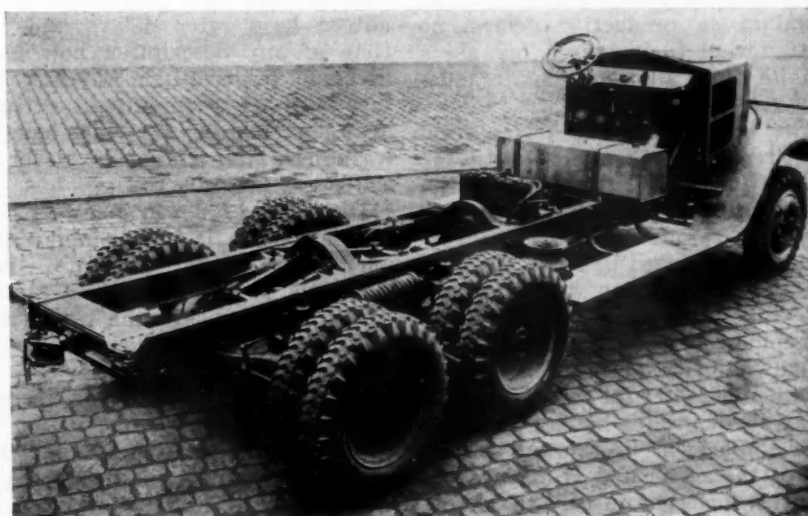
On the other hand, streamlining of long-distance buses has met with

favor. At the show the Krupp company exhibited a neat-looking 28-passenger streamlined bus, equipped with a four-cylinder, 65-hp., air-cooled engine, which gives it a maximum speed of 62 m.p.h. Ludewig Brothers, a firm of body builders of Essen, exhibited a very striking streamlined bus on a Buessing-N.A.G. chassis with eight-cylinder V 155-hp. engine. It is what might be called a $1\frac{1}{2}$ -decker. The floor is very low and carries two rows of seats facing diagonally forward. The space between these seats is available for luggage purposes. Pillars alongside this space carry a sort of platform, about as high as the seat backs, which forms the gangway for the upper seats. The latter also are arranged diagonally, but face inward. There is an air space between the backs of the seats and the body sides, so the upper passengers can look down upon those on the lower deck. The roof curves inward and is provided with large windows. A domed ridge at the center gives

ample headroom for the gangway. The lower seats back of the rear axle face toward the rear, where big windows give their occupants a good view. This bus, of relatively short wheelbase and little more height than a normal single decker, accommodates 45 passengers and is claimed to be capable of a speed of 75 m.p.h.

An interesting loading fixture was shown on an M.A.N. 5-ton Diesel truck. The end section of the platform can be raised and lowered hydraulically, either by hand or engine power. This section can be let down to the ground so that load may be placed upon it without great effort, and can then be raised to the height of the truck floor. Each side of the platform is held by two parallel arms at the ends of transverse shafts which are provided with levers connected to the plungers of two horizontal pump cylinders. In the top position the platform is locked mechanically, so it can be used to carry load without the danger of gradually sinking through leakage in the hydraulic cylinders. The device is said to be particularly adapted to handling containers, and several trucks equipped with it have been ordered by the German railways.

Air cooling of engines is gaining ground in Germany year by year. Some years ago the Phaenomen Company of Zittau introduced a light truck with four-cylinder in-line air-cooled engine, which proved a great success. The German Post Office purchased many hundreds of these for delivery and collection work in country districts. Numerous small "carriers" with air-cooled engines have since been placed on the market.



Krupp cross-country six-wheeled truck with rear suspension on horizontal coiled springs

Yesterday's Costs Must Be Known Today

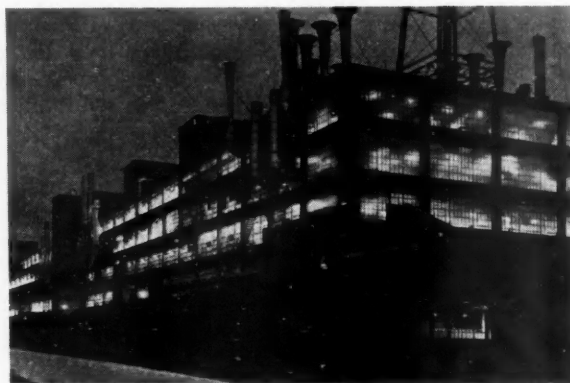
WHAT is happening to cost control under the changing order? Kaleidoscopic changes are taking place in labor relations, wage and price structures, and there are even the rumblings of vertical systems of uniform cost accounting under codes of fair competition. The impact of these forces is being reflected on cost control in a fashion so revolutionary as to command the attention of every thinking executive.

Thought-provoking phases of the situation were aired at a recent round table discussion of the production management group of the Society of Industrial Engineers in a discussion led by James A. Parton of the E. G. Budd Mfg. Co. Some of the comment is reflected here.

Two conditions established by the NRA are cited as fundamental causes for the changing viewpoint affecting cost control activity. One is the matter of minimum wage with its guaranteed base rate, which will now create variable costs since set piece rates no longer completely control the situation. Consequently the guaranteed base wage places a higher premium on production delays, no matter what their source, because a definite time allowance again must be given to each worker.

The other condition arises from the President's agreement with the N.A.C.C. signatories concerning the classification of workers in connection with lay-offs. Under the agreement, as construed by some, prior to official interpretation, the employer must take into account first whether the employee is married or single, second seniority, and ultimately perhaps some respect for the percentage of lay-off of groups having different labor affiliations. If this interpretation of the agreement is made binding it means that in case of lay-off the first to go are single men, then married in order of precedence, regardless of skill or other attributes.

If effective control is to be maintained under conditions imposed by the NRA codes



Courtesy, Dodge Brothers Corp.

Close analysis reveals the part that these two conditions play in the new scheme of things. For example, cost cutting as such can be carried on only within the limits of the guaranteed base rate; delays and idle time of any description now must become a positive item of cost. This throws the burden of cost activity upon marginal factors which have always been important but never so critical as they are today.

Digressing for a moment, we find that emphasis is now being placed upon these broad elements—raw materials, payrolls, and the scrap report. That's where the profit possibility, if there be one, is to be found.

Marginal cost factors include among other things—reduction of down time, economy and precision in the flow of material, better training of employees since they can be laid off only under prescribed conditions, and reduction in labor turnover.

One distinct contribution to progress in the present chaos is the crystallization of previous efforts to rationalize indirect costs. The tendency is to fit every activity within reason into direct cost and this has been carried to the extent that in a number of plants inspection has become a direct function. How far this can be extended is a matter for conjecture, the limit probably being a point where only administrative costs are classed as indirect.

Another valuable contribution to management is emphasis upon the planning of the production force in accordance with actual needs. With labor a direct charge on the product no one can afford to hire workers beyond the immediate need. This applies even more pointedly to the indirect payroll and indirect materials.

Perhaps the most constructive suggestion arising out of the discussion is that cost keeping and cost records should be greatly simplified and

(Turn to page 464, please)

JUST AMONG OURSELVES

Dealer Code Hits High-Priced Cars

THERE are plenty of facts to back up the statement of N.A.D.A. president Fred Vesper that acceptance of the dealer code is overwhelming and that "today 90 per cent of all the automobile dealers in the United States worthy of such designation are operating under this code." And there are facts to indicate also, that the adverse effects on sales are not nearly so great as might have been expected.

The standardized used car allowance, however, has unquestionably made the going hard for the builders of high-priced cars at a time when the going was none too smooth in any case. Long trades—as compared with allowances possible on low priced models—have been an important weapon for the high-priced sellers against the amazingly increased performance, comfort and durability of the lower priced lines during the last few years. Now that weapon has been removed. Sales of high-priced lines are not booming to renewed prosperity along with the rest of the industry.

* * *

Shorter Discounts on Fine Cars

THIS set of conditions points to eventual reduction of prices and discounts on the high-priced lines, even during a period when general costs and prices are on

the up-grade. It points also to introduction of lower-priced models in the lines of some high priced markers. Packard already has announced development of such a car which will be "absolutely noncompetitive in price" with the present line of Packards. The guess is that it will be priced around \$1200.

We are not of the group which thinks that the day of the luxury car has passed. There is certain to continue in the United States a market for distinctive, luxury automobiles—and that market will increase as prosperity returns.

Just how big it will become, only time will tell. The problem for any individual maker involves not only the size of the market itself, but also the size of his share of the market in relation to the capacity of his plant and the size of his overhead.

* * *

President's Settlement Accepted Sincerely

AFTER spending a week in Detroit, we have begun to feel that perhaps the most vital part of what President Roosevelt did in settling the automobile strike didn't appear in the published settlement at all.

Despite a general silence about what actually went on in the President's office when the automobile executives visited him, we deduce from the attitude most executives now have toward industrial relations that the spiritual results were not unlike

those of an old-fashioned revival meeting of the most effective kind. The belligerence of a few months ago has changed for the most part into the sincerest sort of active desire to fulfill the entire spirit as well as the letter of the President's settlement.

Even in the most informal sort of conversations we failed to find a single tongue in a single cheek.

That doesn't mean that the industry has suddenly gone Democratic, but it does mean that the President must have done a rather inspiring man-to-man job with the leaders of our industry and that this inspiration is being spread throughout their various organizations at a surprisingly rapid rate.

* * *

Women Resigned to Code Allowances

SEVERAL women who recently have purchased new cars have expressed interesting reactions to the standardized used-car allowance question in our presence. None of them had any clear idea of what it was all about, but in several cases had tried to get a larger allowance on their old cars than was offered. In every instance they seemed quite satisfied with the final outcome on the basis that "some code just made it impossible for the dealer to offer more." They were sorry they couldn't get more, but seemed to accept as quite normal the fact that they couldn't.

The more contacts we have with the operation of the standardized used-car allowance the more we are convinced that it is workable and sound, despite the fact that it does make the going harder for the high-priced car builders.—N. G. S.

Transmission Torque Change

In articles previously published in *Automotive Industries* the statement has been made that a transmission designed to multiply engine torque must have some point of reaction on the chassis frame. While this is true of inertia-type transmissions and all purely mechanical gears, if the full power is transmitted to the driven member, it cannot be accepted as a general law.

In a two-member fluid transmission it is possible to increase the torque without reaction on the

chassis frame, but part of the power has to be dissipated, and for that reason its value is questionable. The analysis of this gear is of interest, however, as it may lend impetus to a practical solution.

A. Stodola in his book "Die Dampfturbinen," page 120 4th Edition, 1910, calls attention to the fact that in a turbine generator the wheel (rotor and stator) torques are equal, but the turbine casing has a different torque reaction, which remains unchanged, even in case of breakage of turbine wheel blading when no torque is transmitted.

by Waldemar F. Mayer

In a Foettinger-type fluid gear, torque change is possible only if in addition to an impeller and a runner, a stationary member is used. The stationary member secured to the chassis takes the torque reaction. If the stationary member is eliminated, the gear becomes a very efficient slippage clutch; torques become equal and the fluid clutch produces no reaction on the chassis.

In the Foettinger-type clutch the fluid circulates in a closed path. By modifying the two-member fluid gear it is possible to increase or decrease the torque impressed by the impeller on the runner without producing a reaction on the chassis, but the circulation must be interrupted and all or part of the discharge (kinetic) energy in the fluid destroyed. The energy thus dissipated is likely to heat up the fluid excessively, for which reason the principle cannot be used in a speed-reducing device for constant operation; it probably could be used for acceleration periods, however.

Fig. 1 shows the two-member open and closed circuit fluid transmissions.

Subscripts *i* and *r* refer to the impeller and runner;

Subscripts 0, 1, 2 to certain points in the fluid path.

n = revolutions per minute

u = tangential speed at points 0, 1, 2

v = relative velocity of fluid in impeller or runner.

c = absolute velocity of fluid

T = torque (shaft or fluid)

P = power (shaft or fluid)

e = efficiency of transmission

It is assumed that neither mechanical nor fluid friction exists. The theoretical comparative values and the actual operating values are far apart, but our aim is to show the theoretical influence when changing the conditions.

The impeller shaft torque T_i is balanced by torques T_o and T_r of the impinging and discharging fluid streams respectively. The fluid torques of the runner, T_r at the in-

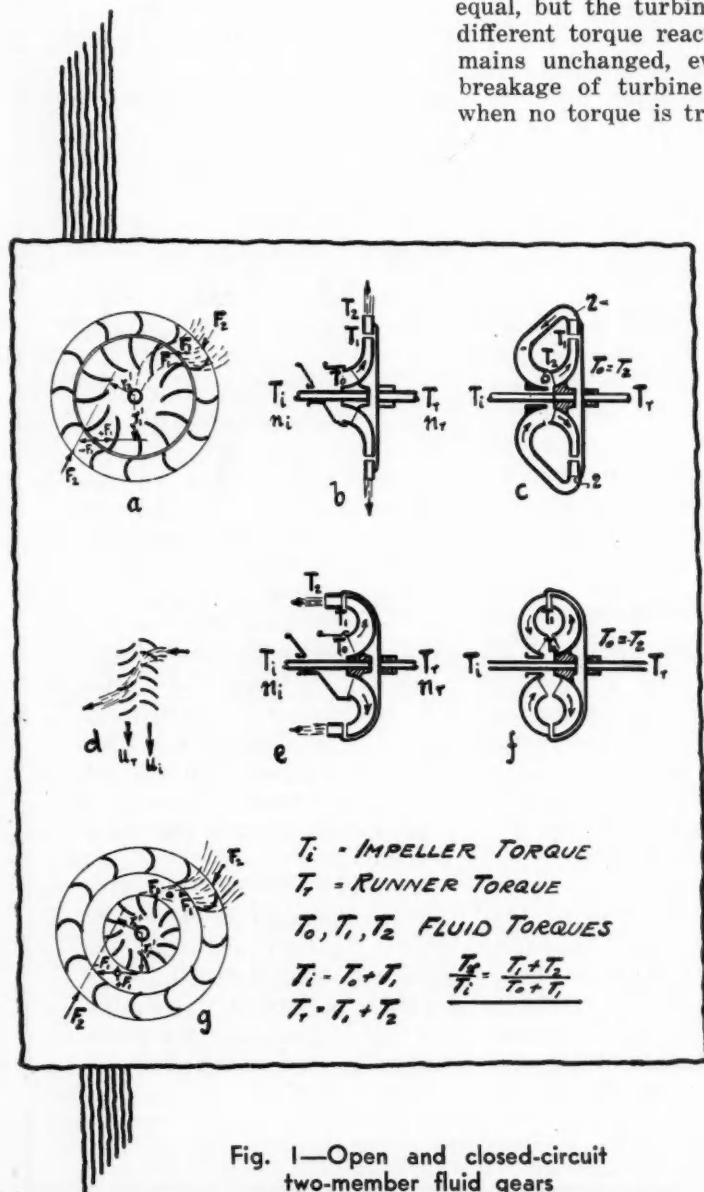


Fig. 1—Open and closed-circuit two-member fluid gears

Without Reaction on Chassis

let and T_i at the outlet, create the runner-shaft torque T_r .

Impeller torque $T_i = T_o + T_r$.

Runner torque $T_r = T_i + T_o$.

The fluid torques may be positive or negative, depending on impeller and runner blading.

$$\text{Torque ratio } \frac{T_r}{T_i} = \frac{T_i + T_o}{T_o + T_i}$$

In an open circuit, T_r/T_i may have any value, theoretically. Torque increase, torque decrease, and torque reversal are possible.

In a two-member closed-circuit fluid gear (see Figs. 1c and 1f) the impeller inlet torque T_o is balanced by the runner outlet torque T_i .

The fluid on leaving blades 2 (Fig. 1c) has a torque T_o . In the bladeless part of the runner the fluid is moving toward the impeller inlet without change in its energy content and without changing its torque (angular momentum).

Neither can an increase of the runner diameter increase the impeller-outlet torque. Fig. 1g shows that the force of the stream has the same lever arm r_o , no matter how big the gap is.

In a closed-circuit fluid gear

$$T_o = T_i$$

Impeller torque becomes $T_i = T_o + T_r$

Runner torque $T_r = T_i + T_o$

hence:

$$T_i = T_r$$

In a closed circuit two-member fluid transmission no torque change is possible.

Efficiency of a Two-member Fluid Gear.

The mechanical power is proportional to the shaft torque and its revolutions per minute. $P \sim Tn$. The efficiency is the ratio of power output to power input:

$$e = \frac{P_r}{P_i} = \frac{T_r n_r}{T_i n_i} = \frac{T_i + T_o}{T_o + T_i} \cdot \frac{n_r}{n_i}$$

for a closed circuit $T_i + T_o = T_o + T_i$

$$e = n_r/n_i$$

or calling the speed difference n_s

($= n_i - n_r$),

$$e = (n_i - n_s)/n_i = 1 - n_s/n_i$$

In the closed fluid gear, power can be transmitted only when there is slippage. An efficient fluid clutch must have a small slippage.

Fig. 2 shows nine different blading combinations built into the same impeller and runner, the open-circuit type fluid gear shown in Fig. 1e, Fig. 3 gives the values of impeller and runner torques.

The curves of Fig. 4 relate to impeller and runner powers and their torque ratios. These curves are based on the following assumptions: Only the blading is changed, three different impeller bladings being combined with three different runner bladings, giving nine combinations (A-K to C-M). All impellers

are driven at the same constant unit speed. All runners start from a standstill and are speeded up until they lose their torque.

The blading determines the maximum impeller power at unit speed, and the maximum runner speed at no load output.

Referring to the graphs, we see that the combination of impeller C

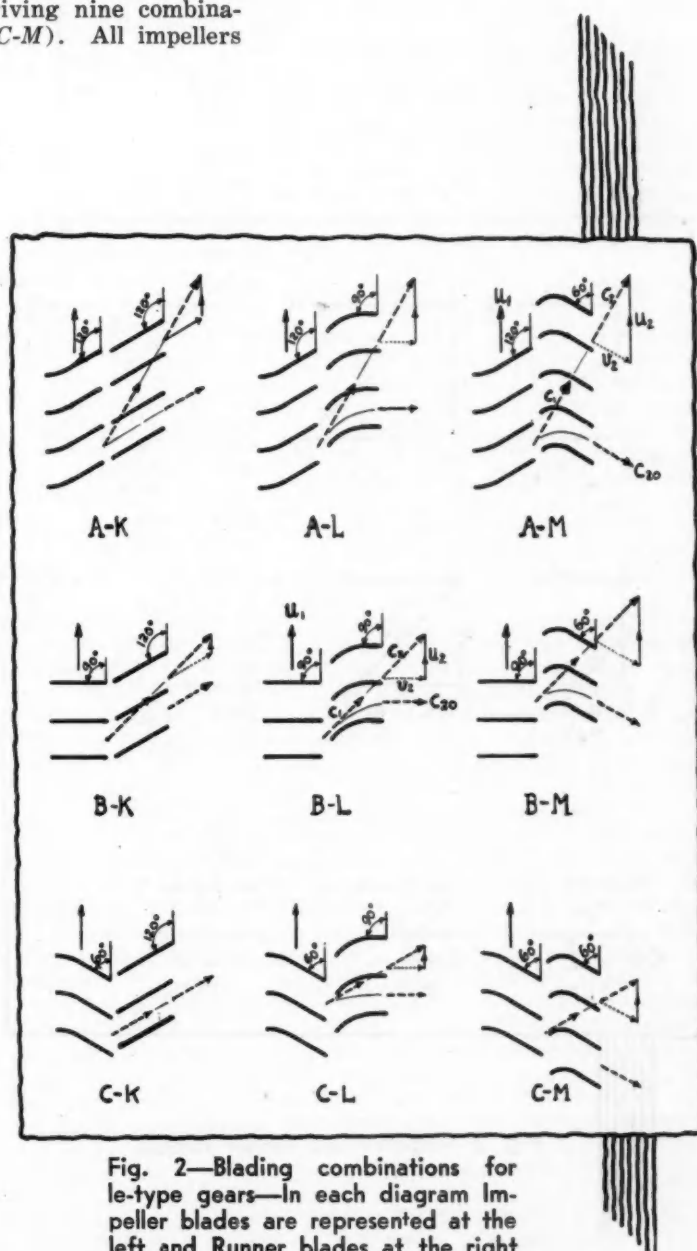


Fig. 2—Blading combinations for le-type gears—In each diagram impeller blades are represented at the left and Runner blades at the right

with runner *K* is incapable of transmitting power, while the *C-M* combination doubles the impeller torque at the start. At 50 per cent runner speed the torques become equal for this combination, but only half of the power is transmitted; at full runner speed no power is transmitted.

Gear *B-M* has a more balanced characteristic. It has 58 per cent excess starting torque, the torques become equal at about 60 per cent runner speed (when only 50 per cent of impeller power is transmitted), and the car may coast on the level at about 58 per cent excess speed.

The efficiency curves of the open-circuit fluid gears are similar to the power curves. In *A-* and *C-type* gears their scales have to be changed for unit power input. Type *B* impeller has a unit power input.

Fig. 4—Impeller and runner power and torque ratios

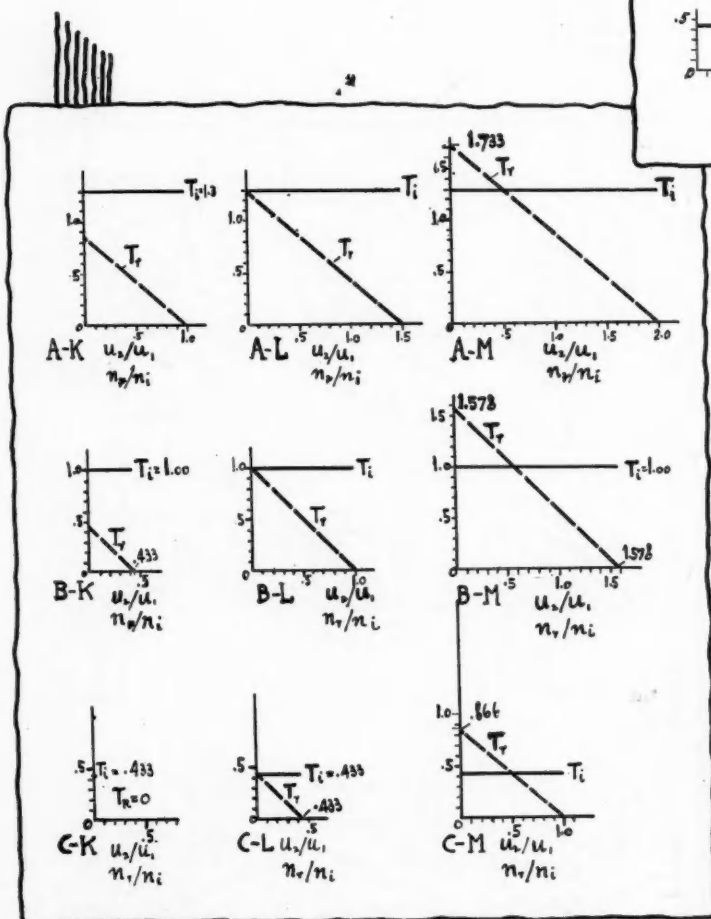
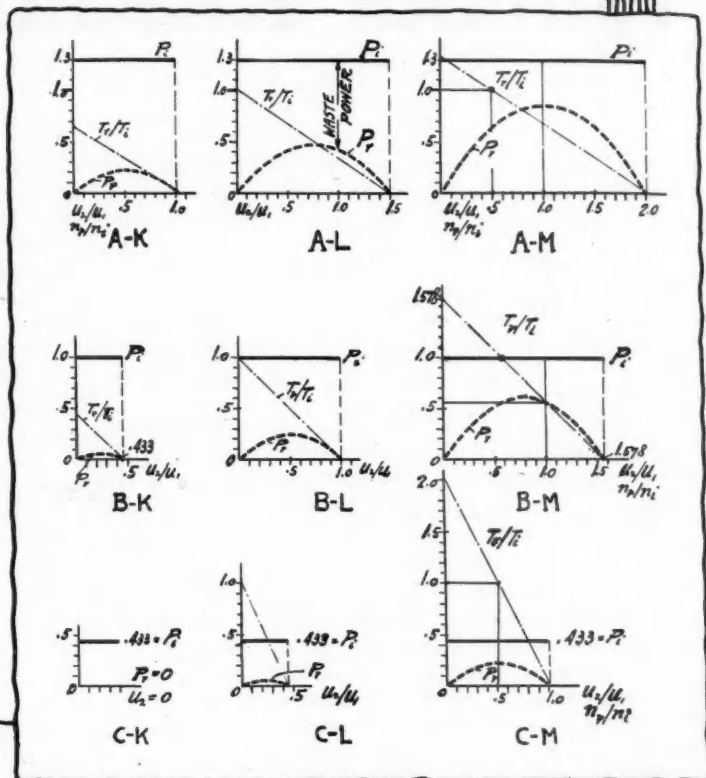


Fig. 3—Impeller and runner torques

The problem of making a practical design is not simple. It is necessary to destroy part of the fluid energy generated, by either by-passing part or the whole of the fluid, or dissipating its kinetic energy after it has left the runner. By-passing of the fluid would be simple if air could be used as the circulating medium, but the small weight of air would make the gear too bulky. With water or oil, by-passing of the fluid is impractical. The only possible solution therefore lies in dissipation of the kinetic energy. It would be advantageous to recirculate the same fluid.

If we used short blades in the fluid clutches of Figs. 1c and 1f, and could devise some means of destroying the kinetic energy in eddy currents between runner outlet and impeller inlet, without transmitting the retarding force on the bladeless part of the runner, the closed-circuit fluid gear would become a torque-increasing gear, albeit an inefficient one.

Labor Factions Brew Trouble

DETROIT, April 10.

A major throttling of automotive production again was apparently prevented early this week when strikers at Motor Products Corp. were finally induced to accept a settlement and called off the strike which had been in progress since last Thursday. Already the strike had been effective in shutting off supplies of parts to the Hudson Motor Car Company sufficiently to cause the plant to shut down. In a day or so other producers would probably have had to follow—the most important of which would have been Plymouth.

With a strike vote scheduled to be taken tonight, the most serious labor situation now facing the industry, is the threatened walkout of tool and die workers belonging to the Mechanics Educational Society Association which sponsored last fall's strike. Tool and die shops are at present busy on new tools and dies for mid-season model changes and new cars to be introduced by several makers, and the threatened strike undoubtedly would seriously interfere with such programs.

The demands of the M.E.S.A. for a 20 per cent increase and a five-day, 35-hr. week were rejected yesterday by the local Automotive Tool and Die Manufacturers Assn. The employers asserted that the Detroit scale already was higher than in other cities and to increase it further would result in increased costs that would drive business away from Detroit.

Commenting on the rejection, Mathew Smith, M.E.S.A. leader said the formal demands were intended to provide a basis of discussion and that he was ready to compromise on a 10 per cent increase and a five-day, 40-hr. week. If a strike is voted, it is said that it will call out 5000 men in some 60 local jobbing shops. Mr. Smith also is reported to have said that in the event of a strike, if work were transferred to the car manufacturer tool departments, the men employed there would walk out.

Turning to other aspects of the situation, a total of 74 discrimination cases have been handled and settled satisfactorily by the Automotive Labor Board to date, according to an official announcement. These include 63 in General Motors and 11 in Chrysler plants.

The question of the submission of union lists to employers apparently has been definitely settled as in every discrimination case, such lists have been presented to employers through the Labor Board.

by Athel F. Denham

Detroit Editor, Automotive Industries

Long-standing disputes at General Motors plants in St. Louis have been put up to the Labor Board. Unions organized there claim membership of over 2000 workers whose names were turned over to General Motors yesterday in connection with alleged discriminations. Incidentally, these unions originally were formed as A. F. of L. locals, but it is reported that they have given up their charters and will function as independent organizations. Dissatisfaction with Federation accomplishments is reported to be responsible for the secession.

Published statements to the effect that the Automotive Labor Board has admitted that it has no jurisdiction over wage disputes are not accurate, Dr. Wolman, board chairman, states. It is understood that the Board's view is that since its policy is one of mediation, it will not render decisions in a case unless both parties have previously agreed to abide by the decision.

Another development of some significance during the week was the holding of conferences at several plants between union representatives and the management. This represents a change in attitude on the part of the plants.

Reverting to the tool and die situation, the major point at issue here, aside from the official one of wages and hours, is the question of organization rivalry between the M.E.S.A. and the A. F. of L. as indicated in these columns last week. Matthew Smith, General Secretary of the M.E.S.A. feels that his organization has not received sufficient recognition in the Washington settlement of the automobile strike and the creation of the Labor Board.

As a result it is in the first place denying that the Automotive Labor Board has jurisdiction over M.E.S.A. complaints by claiming that that board has jurisdiction only over matters of representation, discrimination, etc., and not over wages and hours.

As a further result the M.E.S.A. refusing to cooperate with the A. F. of L. on matters of general concern to automotive workers. Aside from its tool and die membership, M.E.S.A. has launched a large scale organization campaign for production workers in direct competition with the A. F. of L. In retaliation the A. F. of L. has increased its staff of key organizers in the Detroit area with the addition of

five men, called in from other sections of the country.

It is perfectly apparent that the A. F. of L. is regarding the unionization of the automotive industry more and more as its major objective at present. The new men include M. L. Lewis who has been brought in from the Washington headquarters, and who has been reported as active in the Motor Products situation in addition to others; Louis J. Hart has been brought in from Indiana, as has T. N. (TNT) Taylor, who has been in charge of Indiana organization work. These are in addition to Roderick Macdonald and Hugh Thompson, previously added.

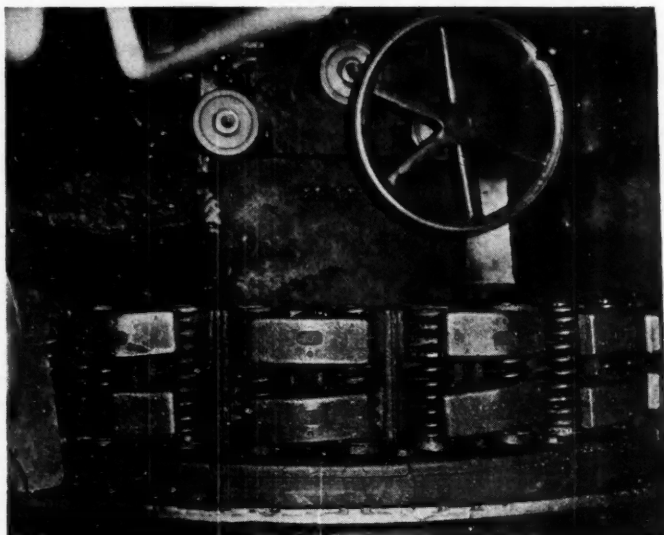
Criticism of the Automotive Labor Board, and particularly Dr. Leo Wolman was also voiced by the A. F. of L., in a telegram sent to President Roosevelt by William Collins, chief organizer in this area. The complaint is based on the attitude of the board in attempting to mediate questions in dispute rather than to offer definite decisions and orders of its own.

The 'accusation' if such it can be called of course is correct, in that Dr. Wolman's board has and is following the policy of mediation in labor disputes as anticipated in these columns last week. Failure to settle the Nash strike although an agreement was arrived at, and similar failure at first to obtain acceptance of an agreement in the Motor Products case can hardly be laid at the door of the board. So far it is labor rather than management which has refused to cooperate with the board in that respect.

An instance of cooperation of industry is in the rehiring of men by both the Chrysler Corporation and General Motors regarding whom there had been discrimination charges on account of union affiliations. These were returned to work Monday morning.

Dissension arose apparently also in the ranks of the labor board for a short period over the week end of April 8. Richard L. Byrd, Labor's representative on the Board, at one time refused to join Nicholas Kelley and Dr. Wolman in a Labor Board session. It is reported that the difficulty arose out of a private conference between an executive of the General Motors Corporation and the other two members, to which Mr. Byrd had not been invited. No definite confirmation of this report has been obtainable. Apparently, however, the difficulties were ironed out and the three-men sessions resumed early this week.

During the negotiations this week on
(Turn to page 474, please)



As this circular table revolves, springs for the "knee action" units of the new Chevrolet, are loaded into the 16 stations of this grinding machine, which carries them to the right. After one revolution of the table, one end of the spring has been ground smooth and square. The spring is then reversed for grinding the other end. Ends must be parallel to within 0.005 in., so springs will not tend to buckle.

Beats Walking

The "reduction as absurdum" of what people will do to avoid walking is recounted by Mougey. Out in Saskatchewan where the weather is three overcoats cold, about 50 degrees below zero, here is what they are willing to do to keep cars on the road:

1. Keep radiator and hood permanently covered and insulated for the winter.
 2. Put up car for the night by draining the cooling system, draining the crankcase.
 3. Also remove battery and park battery and oil behind the kitchen stove.
 4. To start next morning—fill cooling system with hot water, fill crankcase with warm oil, install warmed battery.
 5. Repeat process every day.
- All that to avoid walking. That's the spirit of transportation!

Changing Times

The stress of depression conditions has been reflected in the personnel

changes in the factories. And has been bringing to the fore a new breed of men who are doing things that seemed impossible not so long ago. One way of keeping in step with the times is to read your trade publications. They will keep you in touch with what the other fellow is doing, particularly when you haven't the time to see their activity for yourself.

Cost Saving

Carboloy has just produced a little booklet chock full of illustrations of new and intricate tools tipped with cemented-carbides. Just the thing for your shop library.

Helps Painting

New chemical immersion bath plates zinc die castings with a rust resisting coating of tri-zinc-phosphate which is said to take paint and enamel beautifully. This simple tank process may be of great interest to those using zinc die castings in the automotive industry.

PRODUCTION

Vetoes Corrosion

An electrolytic process providing a rust resistant coating on sheet metal parts is about to be announced. By the way, this process is probably one of the first alternating current electrolytic baths to be used commercially. By simple immersion, the metal acquires a coating of tri-zinc-phosphate which is said to resist the salt spray cabinet test for an unusually long time. Incidentally the coating is quite insoluble and thus impervious to the attack of moisture. The process lends itself to the treatment of fenders, radiator shells, splashers, and the host of other large and small sheet metal units.

Did You Know—

That had aluminum been used for the first Union Pacific train put in service in 1869, it would have been almost cheaper to build it of gold! The price of aluminum in 1852 was \$545 a pound. In 1869 Union Pacific would have paid \$21 a pound, and the price for ingot aluminum alone in three cars would have been \$1,155,000. Ingot aluminum today sells for 23 cents a pound, and the cost of the aluminum in the new Union Pacific train was about \$21,000.—From February *Aluminum News-Letter*.

Whole Family

To show the great family of uses and forms of Bakelite, the material of "infinite" application, its makers have just issued a booklet, "Bakelite Molded," which gives some of the story. The booklet is unusually at-

The Employees' Side of

AUTOMOTIVE INDUSTRIES presents here excerpts from statements made in opposition to the Wagner Labor Disputes Bill by John L. Larkin, general chairman, employees' representatives, Weirton Steel Co., and by Ernest T. Weir, president of the company.

They develop some new aspects of the case which have received scant publicity because there is no horde of newspaper correspondents at Weirton as there is in Washington where organized labor has had the advantage of the nation's greatest sounding board to spread its charges and claims across the country.

The case is of profound importance to all industry because it promises to provide the first major court test of section 7 (a).

The Employees' Side

(From John L. Larkin's statement)

ON September 26, 1933, a small group of men calling themselves members of the Amalgamated Association of Iron, Steel and Tin Workers, called a strike in one department of the Tin Mill. Within twenty-four hours all the gates of the mills were closed. No demand had been made on the management so far as we know, and there were no complaints about wages or hours. There was intense indignation on the part of the great mass of the employees that they were being prevented from working by a small group of Amalgamated members and their organizers. Later the Steel Company appeared before the National Labor Board in answer to a complaint of the strikers.

Although I had previously sent a telegram to Senator Wagner, advising him that I was a Representative of the employees, and had received a reply from him, neither myself nor any other Employees' Representative was summoned to Washington, and we were not present at the hearing.

At the hearing, Mr. Weir agreed, on behalf of the company, that representatives of the National Labor Board might supervise the next regular election, which was to be held the second week of December. The Representatives did not approve of this plan because they had not been in on the hearing at Washington, but did amend the rules to provide for supervision by the National Labor Board, and sent Senator Wagner a letter, asking that a repre-

sentative be sent. No reply was received for two weeks, and the Rules Committee decided to go ahead with the election according to its own rules and by-laws.

Finally a representative of the Labor Board called and proposed a system of nominating by petition, instead of by secret ballot. The Employee Representatives were unanimously opposed to this. This is a vicious and un-American system. Those who sign a petition are subject to intimidation, coercion or reprisals. The 49 elected representatives were unanimously opposed to it. Finally we were summoned to Washington for a hearing before the Labor Board, at which hearing the Labor Board attempted to make us change our rules.

We took the position that we represented a large majority of our employees and had a right to adopt our own form of organization and would not accept nominations by petition. Senator Wagner, in the hearing before the Labor Board, threatened to send me to jail for defying, as he said, the Government of the United States. It was obvious that the Labor Board was prejudiced in favor of union labor. While I was speaking before the Labor Board, Mr. Green asked me how many men worked the first day the mill opened. I told him 50 per cent. He asked me if I was one of them. I answered yes. I was then publicly ridiculed by him. He said: "You should be ashamed of yourself to go back on your fellowmen like that." This brought applause and laughter. I answered him in this man-

ner: "I thought I came before a fair Board, but you are not fair, Mr. Green."

We posted the rules for the election according to our by-laws a week before the election and sent a copy to the Labor Board. We heard nothing further from them. The election was scheduled to begin Sunday night at midnight, as we work in three shifts and the first crew comes on at midnight on Sunday. Saturday afternoon, about 3 o'clock, the company received a set of rules from the Labor Board, with instructions to post them in the mills. These rules were entirely different than the rules of our organization. They provided for nominations by petition, as well as by ballot, a silly and unworkable scheme. It would have permitted a man's name to be put upon ballot by a petition signed by ten persons, and to thereby displace the name of some other man who had waged an active campaign and received a large number of votes.

The competition for Employee Representatives in our organization was very keen. The men had printed campaign literature and fought for the positions on the committee. Imagine the situation of a man who had made an aggressive campaign and received two or three hundred votes, and then have him crowded off the ballot by somebody who was nominated by a petition signed by ten men who might have been the same men who voted at the primary and whose signatures might have been obtained to the petition by coercion or in ignorance.

Besides that, the rules laid down by the Labor Board provided for 98 representatives instead of 49. In other words, it doubled the number of representatives from every mill. Take, for example, our Strip Mill, where the by-laws provide for 11 Representatives. Campaigns had been going on for weeks and various slates had been formed, each upon the assumption that there were 11 Representatives to be elected, and on Saturday afternoon, about thirty hours before voting was to start, comes a set of rules from the Labor Board, directing 22 instead of 11 persons to be chosen from that mill. Why, if the Steel Company had posted those notices in the mill that day, there would have been a riot, and I do not blame them for refusing to post such notices.

We still invited the Labor Board to supervise the election under our own rules, and it failed to do so. We went ahead and held the election. Over 83 per cent of all the eligible employees

of the Weirton Case

voted, and the total vote was equal to 98 per cent of the men who were at work in the mills that day.

I understand Senator Wagner claims that the Weirton Steel Company broke its contract with the Labor Board. My view, and I think it is the view of the vast majority of our employees, is that the Labor Board's conduct in the matter was shameful and a disgrace to the Government.

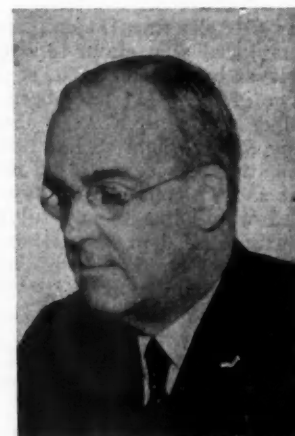
The 49 Representatives chosen at that election are functioning as the Representatives of the men, and there is very little dissatisfaction with them. The men who are stirring up trouble, going to Washington and making extravagant charges, represent a very small minority of our employees. They call mass meetings from time to time, many of which have less than a hundred in attendance, and some of those are not employees. Disinterested investigators coming into Weirton will not hear a murmur of complaint. The men are working steadily and are satisfied with their jobs. We have had a higher percentage of operation all during the depression than any other steel company, and still have today. We have never had any difficulty taking up any of our problems with the management. We recently made a demand for a wage increase and obtained it, and obtained a written contract as a result of our demand. I certainly don't think it was the intention of the President or of Congress to make it illegal for us to

conduct the kind of an organization that we are conducting. We are perfectly satisfied with it. We have no desire to send hundreds of thousands of dollars into the tills of union labor officers or organizers. We know our own problems better than they do and we can accomplish more for our men than they can accomplish.

Do you imagine for one minute, if there was the unrest at Weirton that the labor leaders would make you think there is, that we would be operating today and breaking production records? Only last week our 48-inch Strip Mill broke an all-time world's record for production. Those things do not happen in a mill where 98 per cent of the men are dissatisfied, as some of the Union agitators would have you think is the condition in Weirton.

Just recently the Labor Board sent a man to Weirton to make reports on the labor situation there, and that man turned out to be a former organizer for the Amalgamated Association, and he is still a member of the Association. All through our controversy the Union agitators were in direct touch with the Labor Board and often received advance information as to what the Labor Board was going to do. Is it any wonder that we had no confidence in the Labor Board as a fair and impartial court?

(Signed) J. LARKIN, *General Chairman Employees' Representatives*, Weirton Steel Company.



Ernest T. Weir, president of Weirton Steel Co.

union in favor of national unions. If our men had belonged to a national union during this period of eight months, there would have been paid in dues, without counting initiation fees, out of the pockets of the workmen instead of the company, approximately \$150,000, none of which would have been subject to public accounting and a great part of which would have gone to national union offices. If, in seeking to protect my men from the domination and control of national unions, I am a "public enemy who ought to be pilloried," as Mr. Green referred to me, then I am proud to be so regarded.

I think it is a direct insult to the workers in our plants that it should be presumed by Senator Wagner or anybody else that their allegiance can be purchased not only by this insignificant sum but for any sum of money or other favors. Employee representatives are keenly interested in their work, realizing the responsibility which rests upon them, and there is no danger of their being coerced by any company into failing to protect the interests of the men by whom they were elected.

I noted Mr. Green's remarks before your committee about starving families in Weirton, whom he alleged to be walking the streets because of my attitude toward labor. Inasmuch as I am not inclined to take much stock in general statements, and believe that it is always essential to get the facts, I just took the trouble to obtain some figures from the Federal Unemployment Agency and the CWA as to the unemployed in the district in which the town of Weirton is situated. The two agencies together report 455 unemployed persons. One hundred and fifty-four of these were employees of other companies, and 67 of them young men who never have been employed, so that there is left 234 who claim to have been former employees of the Weirton Steel Company. One hundred and twenty-three of these left our employ before Sept. 1, 1933; some of these as long ago

The Employer's Side

(From Ernest T. Weir's statement)

THE Weirton Steel Company spent from July, 1933, to February, 1934, inclusive, a period of eight months, in the payment of employee representatives for time engaged on their work, approximately \$12,600. During that time it had payrolls in those mills of approximately \$12,000,000, so that the amount paid to these men for that time was a relatively insignificant figure, and when distributed among the 49 representatives averaged about \$30 per month per man to compensate them for time lost from their own jobs while working for the benefit of their fellow

employees. The services of these men were of great value in that they "ironed" out and solved many problems that otherwise would have had to be handled by the management. This \$12,000 spent in a period of eight months, with a payroll numbering 13,000 people, represented a cost of about \$1 per man, or 12½ cents per month. This compensation for lost time is payable to whomever is elected, and, therefore, could have no effect upon the attitude of the representative toward the company. It cannot, therefore, be a means of favoritism and the only purpose of putting such a clause in this Act is to attempt to exterminate the company

as 1916, leaving 111 employees now unemployed who claim to have been employed by us prior to the strike. Twenty-two of these 111 have been reemployed since the figures were obtained, leaving 89, of whom 43 had less than eight months' service with us, some of them as short a time as two days.

I would like to say further that all during the depression there has never been any starvation in Weirton, and that community made it a point to handle its own relief and take care of those who might be in want. I defy Mr. Green or anybody else to prove that there is or has been starvation in Weirton.

We welcome the opportunity to have the matter laid before the court in a legal, orderly way, instead of being subjected to the newspaper tirades of Senator Wagner, founded upon uncon-

firmed reports from strike leaders and union agitators. The courts were always open to Senator Wagner and are the proper place for the determination of such matters. It seems to me it would be very dangerous to put the sweeping powers sought to be given in this bill into the hands of a National Labor Board, if we are to judge its methods and procedure by the present Board.

I want to give you an example of what was asked of us in connection with the investigation of our case. We were served with written notice demanding the production of various papers and records. There were 10 items in the list, including records of correspondence, expenditures, reports, and papers. I just want to call your attention to four of the items that were asked of us. We were asked to produce our papers and statistics, showing the sys-

tem for distribution of employment monthly for the past five years. We were also asked to produce monthly records for the past five years as to new employment, discharges, lay-offs and shut-downs, with list and identification and classification of all persons employed, discharged or laid off since Sept. 1, 1933. Each mill and plant hires its own men. A man may work a few days a week, then be off a few days, and a record is made of that in loose-leaf form, which record is sent to the office for filing. To have produced the records required of us would have taken the services of several clerks for a month or more and it would have required a truck to convey them. We were also asked to produce records of the general volume of the business in tonnage and value and the sources and volume and value of the raw materials utilized.

Yesterday's Cost Must Be Known Today

(Continued from page 454)

brought down to a few essentials with particular emphasis on their practical usefulness. Too often, and this is particularly true of some small plants, cost accounting is made too formal, too complicated, and expensive. Unless the records can show current activity within 24 hours so as to serve as a positive check, they have little except historical value.

Naturally the right kind of standard cost system could be invaluable under present conditions. Then the job would be to watch the variables—day work, special allowances, material spoilage, etc. The control system should be designed to give the foreman a quick picture of what's happening so that he can get after the leaks while they are leaking.

It has been suggested that formal cost finding with its attendant paper work may go by the board as it did in the Ford industries although it is unlikely that many corporations will be willing to go that far. Yet it is fact that several years ago many large companies abandoned paper records and a close check on the multitude of small parts such as nuts, bolts, screws, lockwashers, etc., because they found that the gross yearly loss on such items was insignificant when compared with the cost of records and organization.

In at least one large automotive parts plant, cost keeping has been simplified to a control of labor and materials, eliminating detail by mak-

ing the department head responsible only for his own controllable expense. Thus an expense center such as maintenance, or tool crib, or power sub-station, is centralized and considered with respect to the whole operation, at least from the point of view of the management, and no attempt is made in the foreman's budget to apportion parts of the burden to his department.

If that is at variance with formal accounting practice, it is simply an indication that the industrial engineer is more practical and more flexible in his thinking. Incidentally, what is happening today is evidence that progressive factory management is shifting its thinking from the production-minded attitude to one that also comprehends the cost-minded.

For instance there are many disappointments in store for the factory manager who attempts to sail too closely to the purely accounting budget. There is some irreducible limit below which costs can not go, particularly with the added burden of variable costs which are the order of the day. What is the use of budgeting a department to two cents when it must spend ten at reduced activity. This may sound elementary but it's a common experience where budgets are practically inflexible.

What can be profitably salvaged of the conventional cost system is some modification yielding a quick check on current operations, useable in

controlling payroll and materials. This can be supplemented by high speed tabulating equipment to develop current data within 24 hours as to enable the foreman to act quickly at points of pressure or lack of control. Historical data is of little help when profit possibilities depend on immediate action.

This would seem to apply particularly to smaller plants where cost keeping of a formal nature is often a rather expensive proceeding. In these plants, management is so much closer to the source of expense that a simplified, quick control can be much more practical and will certainly give a truer picture of the situation.—J.G.

Data on Bell Housings and Flywheels

The Standards Department of the Institution of Automobile Engineers has recently issued a data sheet of dimensions for bell housings and flywheels. It is noted that designations and all of the principal dimensions (outside diameter, pilot diameter, bolt-circle diameter and number of stud holes) correspond to the S. A. E. Standard for flywheel and clutch housings, so that the same automotive flywheel-housing standards obtains throughout the English-speaking world or wherever inch measurements are used.

NEW DEVELOPMENTS

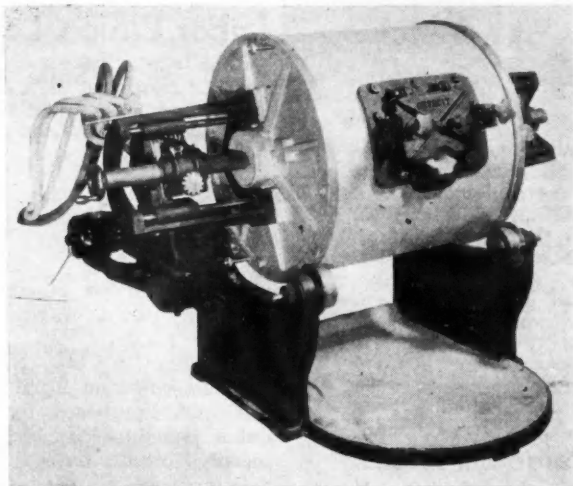
Automotive Parts, Accessories and Production Tools

Rocking Electric Furnace Announced

A rocking electric furnace, of 25 to 100 pounds capacity, has been announced by the Detroit Electric Furnace Company, Detroit, Mich. The

Except for size, the furnace is a faithful reproduction of the larger rocking electric furnaces and, according to the manufacturer, will provide the speed, economy, and analysis control for which these furnaces are well known.

The furnace is completely equipped

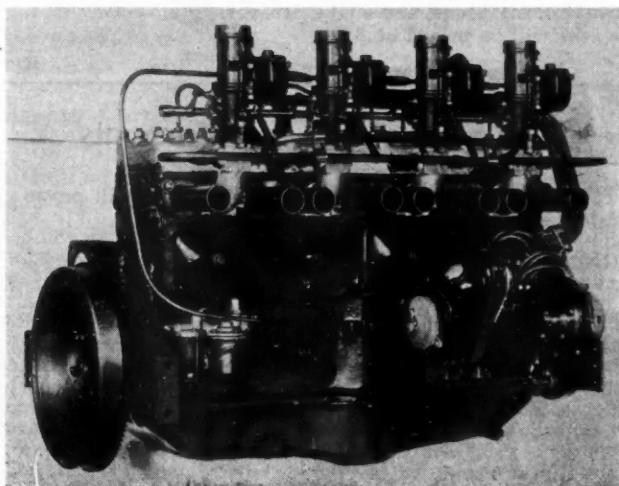


Electric Furnace Co. rocking electric furnace

unit has been designed for either production or experimental melting of small lot runs of metals, such as iron, alloy steel, copper, brass, nickel, aluminum or precious metals.

with transformer, control panel, switches, meters and rocking mechanism. It has a nominal electrical rating of 20 kilowatts and may be connected to any industrial power supply.

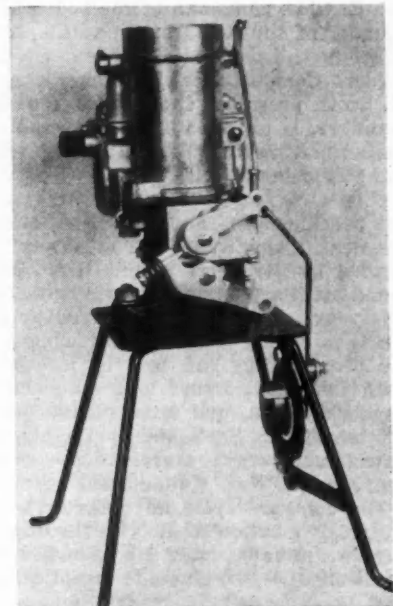
Studebaker Engine Adapted for Racing



Studebaker President engine as modified for racing. It is being offered for general sale at \$750.

Carburetor and Automatic Choke Control

Bendix Products Corporation, South Bend, Ind., manufacturer of the Stromberg carburetor, announces a new car-



New Bendix-Stromberg carburetor and automatic choke control

buretor and automatic choke control.

The major change in these units over previous models is that part of the automatic choke control is built into the throttle-valve body of the carburetor. This design eliminates a number of parts and makes a very compact unit. The thermostat unit, which requires the heat of the exhaust gases for its operation, is built into the manifold riser.

The accompanying illustration shows the carburetor and thermostat unit mounted on a stand in the same relation as when they are mounted on the manifold.

There has been no change in the operating principle of the automatic choke control. The vacuum piston, which is incorporated in the throttle body, is indirectly connected to the carburetor choke valve, so that as soon as the engine fires and a manifold vacuum is created, the piston forces open the choke valve to admit the proper amount of air at the time of the initial fire. From this point on, the choke valve, which is located off center in the air entrance, is forced open by the velocity of the inrushing air working against the tension of the thermostat. As the thermostat gradually absorbs heat it loses its tension and the air forces the choke valve to the wide-open position.

To keep the engine from stalling during the warming up period, a fast idle cam is used, which prevents the throttle valve from closing tightly until the engine reaches its normal operating temperature.

Olds and Scott Lead Opposing Groups In Proxy Fight for Control of Reo

LANSING—A fight for control of the Reo Motor Car Co. between Ranson E. Olds, chairman of the board and founder of the Reo Motor Car Co., and a group called the Independent Stockholders Committee with which Richard H. Scott, president and former general manager, is allied, will be climaxed at the annual meeting of the stockholders to be held here April 17.

There are two groups, the "Independent Stockholders" and the "New Management Committee." The latter is headed by Mr. Olds and it took command of the company's affairs early this year. The groups are lined up in opposite camps and are gathering all the proxies they can for the meeting. Both sides have issued long statements to stockholders, and letters have been written by Mr. Scott and by Donald E. Bates, secretary-treasurer of the company, in the "New Management" group.

The controversy is an outgrowth of the reorganization of Reo by the directors in January when Mr. Scott, who has been with Reo since its inception in 1904, was ousted as general manager and Mr. Olds became Chairman of the Works Committee with which affairs of management and policy were placed.

This action was followed by the resignation of Mr. Scott's brother-in-law, Harry Teel as Works Manager and the appointment of Ray A. DeVlieg as his successor. Subsequently R. J. Fitness was named chief engineer succeeding H. T. Thomas who had held that position virtually since the formation of the company.

The group headed by Mr. Olds and including Mr. Bates, Director George E. Smith, and Mr. DeVlieg, claims it has proxies representing 400,000 shares of stock and charges that the "Independent" move is sponsored by a group of outsiders seeking control.

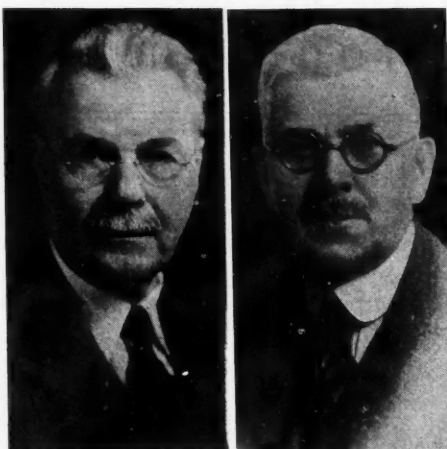
Included in the "Independent" faction are W. S. Diamond, New York; Mr. Scott and Messrs. Teel and Thomas. They point out that Scott is the largest single stockholder and that he and his friends hold over 140,000 shares. They also claim that the group now in control holds only 25,000 shares.

The "Independents" in their letter to stockholders state that sales have declined 83 per cent in the past six years, or from \$61,000,000 to \$10,000,000, and that working capital has shrunk from \$20,000,000 to \$7,000,000.

Addressing the stockholders in one communication, Mr. Scott said:

"So there may be no misunderstanding, I wish to go emphatically on record with my belief that only by signing the proxy of the Independent Stockholders' Committee will it be possible for the stockholders to obtain proper representation in the management of the company. When this is done our company can again look forward to recovering its former position in the automotive industry."

"Denying that there is any fight between Mr. Scott and himself, Mr. Olds declared 'the only fight is to save Reo for its stockholders and for Lansing.



R. H. Scott

R. E. Olds

Why doesn't Mr. Scott tell his stockholders what the real motive is behind this campaign?" He declared he had been informed that Mr. Scott and his group were intending to unload their stock to New Yorkers who, he said, constitute the so-called Independent Committee. Regarding the circular letter endorsed by Mr. Scott, Mr. Olds

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Graham-Paige Six Prices Up; Eights Unchanged

DETROIT—The list prices of the Graham line of standard sixes have been increased \$50, except the convertible coupe, the price on which remains unchanged, according to an announcement by J. B. Graham, president of the Graham-Paige Motors Corporation. No increase in prices will be made on the eight cylinder models or de luxe sixes, Mr. Graham stated.

The new price of the Graham standard six business coupe will be \$745, while the standard six sedan and coupe with rumble seat will be priced at \$795.

Late Labor Developments

DETROIT, April 12—The threat of a strike closing substantially all tool and die jobbing shops here waned late today as settlements made by individual plants made it appear that, if a walkout is voted, it will affect only shops which have not reached an agreement with the M.E.S.A.

AFL unions have presented demands to GM plants in Pontiac in the form of a contract cancellable by either party on 30 days' notice. Contract calls for 30-hr. week, with overtime rates for hours in excess of that total up to an absolute weekly maximum of 36 hr.; \$1 hourly minimums for skilled and 60 cents for unskilled; no lay-offs so long

as production will permit plant operation on 24-hr. weekly basis; men laid off to be rehired on the basis of seniority and union recognition.

Col. R. W. Lea of NRA is in town to help restore harmony. *** Richard Byrd of Automotive Labor Board has gone to Kenosha. Reported unions at Nash plants are considering withdrawal from AFL as unions at St. Louis GM plants already have done. *** GM denies that it has met formally with representatives of unions at Cleveland plants, nor has it recognized them, as no list of members has been submitted.

Nash Officials Meet Labor Union Leaders

Strike Seen Nearing Speedy End Following Wage Increase Talk

KENOSHA—It is believed here the Nash Motor Company strike is nearing speedy settlement. Following a conference Wednesday between union leaders and Nash officials a special meeting of union members was called yesterday to vote on wage increase proposals.

Workers in the Nash plant at Kenosha voted on April 7 to reject the settlement proposed by the National Labor Board which had previously been accepted conditionally by the company. Seaman body employees also voted to reject the settlement terms. Workers at the Racine plant had previously voted to accept the settlement but its rejection by the other two plants meant the continuation of the strike at all three plants. About 4600 workers are affected. The strikers are reported to be holding out for a 20 per cent increase instead of the 10 per cent provided in the settlement.

The terms proposed by the Labor Board, which were prematurely announced as a settlement of the controversy, provided:

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NS

Schedules Totaling 395,000 Units Will Make April Biggest Month in Four Years

by Athel F. Denham

Detroit Editor, Automotive Industries

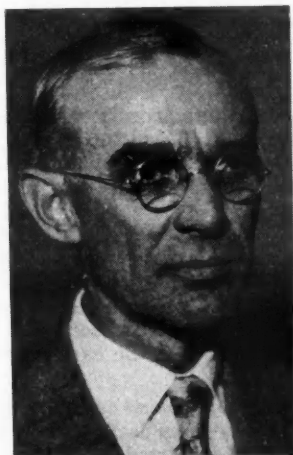
DETROIT—Revised production estimates for the month of April now show a total of 395,000 cars and trucks, the largest single month's production in four years.

Parts supplies are still a stumbling block in the way of achieving schedules, however, and it is possible that inadequate supplies may cause the month to fall short of scheduled production. Some half-hearted efforts have been made by car producers to get parts suppliers to build up banks of parts stocks in case of possible labor troubles, but little has been achieved along these lines as producers are hard enough put to get out production to fill immediate delivery requirements. In many cases lack of adequate new production equipment in parts plants is responsible for the situation. Parts producers are still hesitating to purchase new equipment due to the unsettled labor situation, and the certainty as to future production costs with wages and materials prices continuing to rise.

Franklin Fay Chandler

LAFAYETTE, IND.—Franklin Fay Chandler, vice-president in charge of sales, Ross Gear & Tool Co., died at his home here April 6 after a brief illness. He was 57 years old.

Mr. Chandler was widely known in automotive circles, and was active and prominent in the affairs of the Society of Automotive Engineers. He joined the Ross organization in 1923 as chief engineer and five years ago was elected vice-president, heading both the sales and engineering departments. He was a past-chairman of the Indiana S.A.E. section and in 1926 and 1927, he was a member of the council of that society.



Franklin Fay Chandler

He has been a member or chairman of 29 S.A.E. committees since 1923.

Mr. Chandler was born in 1876 at Indianapolis. He took a mechanical engineering degree from Purdue University, Lafayette, Ind., and for 18 years was connected with the Chandler and Taylor Co. of which his father was one of the founders. He served his Alma Mater as alumni trustee and in June, 1916, became chairman of its Standing Committee in Engineering and Technology. In 1922 he became sales manager for the Chandler & Taylor Co. Subsequently he helped to organize and became president of the Adaptable Tractor Co., Indianapolis.

Hudson-Terraplane Prices Are Raised \$20 to \$100

DETROIT—Price increases ranging from \$20 to \$45 on the Terraplane and from \$30 to \$100 on the Hudson, have been announced by the Hudson Motor Car Co. A comparison of the new and old schedules follows:

Terraplane			
112-in. Wheelbase	New	Old	Increase
Coupe	\$610	\$565	\$45
Coach	630	590	40
Sedan	685	650	35
Comp. Victoria	655	620	35
Coupe, 2-4 p.	655	610	45
Comp. Sedan	715	680	35
Conv. Coupe	715	670	45
116-in. Wheelbase			
Coach	690	670	20
Coupe, 2-4 p.	720	690	30
Sedan	750	730	20
Comp. Sedan	780	760	20
Comp. Victoria	720	700	20
Conv. Coupe	770	740	30
Hudson			
Std. 116-in. Wheelbase			
Coach	755	725	30
Comp. Victoria	785	755	30
Sedan	815	785	30
Comp. Sedan	845	815	30
Coupe, 2-4 p.	785	745	40
Coupe	735	695	40
Conv. Coupe	855	815	40
De Luxe 116-in. W.B.			
Coach	845	805	40
Comp. Victoria	875	835	40
Sedan	905	865	40
Comp. Sedan	935	895	40
Coupe, 2-4 p.	875	825	50
Std. 123-in. Wheelbase			
Touring Sedan	970	895	75
Comp. Touring Sedan	1,000	925	75
De Luxe 123-in. W.B.			
Club Sedan	1,095	995	100
Brougham	1,195	1,095	100
Comp. Club Sedan	1,125	....	....

Nash Omits Dividend

KENOSHA—Nash Motors Company reports for the quarter ending Feb. 28 a net loss, after depreciation, taxes and other charges, of \$123,720, against \$134,136 loss in the quarter ending Feb. 29, 1933. This is a reduction of \$10,416.

The quarterly dividend of 25 cents due at this time was omitted by the directors.

While scattered reports indicate that the sales curve in some sections of the country, and for some producers, is not rising as sharply as earlier this year, this is not true of the country or the industry as a whole.

Ford with a domestic schedule of between 90,000 and 100,000 cars and trucks reports the last ten days of March exceeding the first twenty in retail deliveries.

Chevrolet reported retail deliveries of better than 97,000 in March compared with 41,000 a year ago.

Production schedules for April list over 18,000 Pontiacs.

During March 14,891 Pontiacs were built. This is three times the March production for 1933 and 37 per cent above February of this year. The production peak was reached during the last week of the month when 3757 cars were run off, an average of 751 cars per day. Pontiac's average production has been 750 cars per day since March 19.

Dodge Brothers Corporation report retail deliveries of 2928 Dodge passenger cars, 2619 Plymouth cars and 1112 Dodge trucks—a total of 6619 vehicles delivered to purchasers for the week ending March 31.

Retail deliveries of 8378 Plymouth cars during the week ending March 31, was the largest week in the history of the company. The total represents an increase of 6.8 per cent over the previous week and almost three times greater than the same week of last year. Shipments of 9921 Plymouths last week, as compared with 3506 in the same week of 1933, represents a 1934 gain of 183 per cent. Retail deliveries for the first quarter of the current year exceed the first quarter of last year by 115.4 per cent.

Orders received this year to and including April 4, total 189,272 as compared with 164,000 last year.

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March NACC Production and Employment Reach Highest Levels Since Sept., 1929

NEW YORK—All previous monthly records of production and employment by N.A.C.C. members back to September, 1929, were eclipsed in March according to a report released this week estimating the output of Chamber members at 262,156 cars and trucks. The number of workers employed also attained the highest level since September, 1929.

With Ford production last month placed at approximately 80,000, the industry's March total was about 342,000, which checks closely with the 340,000 estimate made last week by *Automotive Industries*. This total, which compares with 124,634 in March, 1933, is sufficient to put first quarter production over the 750,000 mark.

On the basis of the estimate, production by Chamber members was 208 per cent above the corresponding month last year and 49 per cent above February of this year.

Production for the first quarter was placed at 539,128 units, an increase of 84 per cent over last year.

Notwithstanding the substantial advances in factory operations, nearly every automobile company is reporting heavy banks of unfilled orders.

The Chamber report which includes the figures for all major producers in the industry, except Ford, is summarized as follows:

March, 1934	262,156
February, 1934	175,386
March, 1933	84,983
Three months, 1934	539,128
Three months, 1933	292,176

SAE Reveals Program For Tractor Meeting

MILWAUKEE, WIS.—At the S.A.E. National Tractor and Industrial Power Equipment Meeting scheduled to be held here on April 18 and 19, there will be morning, afternoon and evening sessions on the first, and morning and afternoon sessions on the second day.

At the morning session on the 18th, which will be presided over by P. W. Eels of the Leroi Motor Co., Fowler McCormick of the International Harvester Co. will speak on "The Relation of Engineering to Manufacturing and Merchandising in the Farm Machinery Industry." At the afternoon session, to be presided over by J. B. Fisher of the Waukesha Motor Co., two papers will be read, one on "Some Diesel Tractor Problems," by H. H. Howard of the Caterpillar Tractor Co., the other on "Spark-Ignition Engines for Agricultural and Industrial Use," by E. R. Jacoby of Continental Motors Corp. The topic at the evening session will be "Research in Agriculture," and the speaker, S. H. McCrory, Chief of the Bureau of Agricultural Engineering of the U. S. Department of Agriculture. Dr. C. H. Dickinson will preside.

On the morning of the 19th, A. C.

Staley of the Chrysler Corp. will speak on "Requirements of Tractor and Industrial Engines," the meeting to be presided over by A. M. Lavers of the Minneapolis-Moline Power Equipment Co. The final session, on the afternoon of that day, will be presided over by C. G. Krieger of the Ethyl Gasoline Corp., and a paper on "Chemical Hay for Mechanical Horses," by R. E. Wilson and T. E. Barnard of the Standard Oil Co. (Ind), will be presented and discussed.

Indianapolis Pacemaker



"Big Boy" Rader

Who will drive the 1934 LaSalle roadster at the head of the procession in this year's Speedway Classic. Rader has been connected with the experimental staff of the Cadillac Motor Car Company for several years.

Bohn Aluminum Reports \$1,494,552 Net Profit

DETROIT—The Bohn Aluminum and Brass Corporation reports a net profit of \$1,494,552 for 1933, against a deficit of \$720,567 for 1932.

The Dec. 31, 1933, balance sheet shows current assets of \$5,647,761, current liabilities, \$702,130 and working capital, \$4,945,631 for 1933. Among the current assets are cash, \$79,395; accounts and notes receivable, \$908,826; inventories, \$4,591,690, and cash value of life insurance, \$67,850.

Goodrich Co. and Workers Buy Life Pension Plan

AKRON—The B. F. Goodrich Company and subsidiary companies in the United States and Canada have adopted a salary deduction annuity plan according to J. D. Tew, president.

Employees and the company will each make weekly contributions to the plan. The amount the individual employee

contributes will be regulated by his age and his earnings. Annuity payments will begin at age 65 for men and 60 for women employees. The Aetna Life Insurance Company wrote the contract which is reported to be the largest annuity contract ever written by that company. Participation in the plan is voluntary and also provides death benefits.

NRA Red Tape Cut Helps Prosecution

New Order Sends Violation Cases Directly To U. S. Attorneys For Procedure

WASHINGTON—General Johnson this week simplified NRA's cumbersome enforcement procedure and issued orders intended materially to speed up prosecutions of code violators.

In letters and orders to State Directors and Code Authorities amending sections of NRA Bulletin No. 7, the Administrator instructed these officials to refer all cases of non-compliance which they could not adjust directly to the Federal District Attorneys in their respective territories.

Heretofore it has been necessary for the field agencies to refer all cases requiring court action direct to the NRA administration here for sifting and later reference to proper government departments for prosecution. The old method resulted in clogging General Johnson's office with a staggering amount of detail, seriously hampering effective work.

The principal order, which becomes effective April 18, will materially speed up prosecution of code violators and is designed to meet the mounting criticism of NRA for delays in enforcement. Pending the effectiveness of this order Code Authorities and State Directors are asked to send their most clearcut cases of violation to the newly created NRA Litigation Division which will prepare the best of the cases for early court action.

General Johnson's order, however, made it plain there is to be no wanton prosecution of alleged violators where the cases are not properly supported by facts.

Mogford Resigns

BUCHANAN—The resignation of E. C. Mogford as vice-president of the Clark Equipment Company, has been announced. Mr. Mogford, who has been with the company for 20 years, will remain as a director.

Spicer Company Reports

TOLEDO—Spicer Manufacturing Company sustained a net loss of \$130,698 for 1933. This figure is considerably under the loss reported for 1932, which was \$1,414,315.

Rush Steel Contracts To Beat High Prices

**Automotive Consumers
Show Little Disposition
For Speculative Buying**

NEW YORK—The anticipated rush to contract for as much steel as possible before the effectiveness of higher prices is under way.

Producers, fearing that many consumers will endeavor to cover not merely their current requirements, but also part of their third quarter needs, are scanning tonnages involved in business offered them. In quite a few instances producers are calling the attention of buyers to the code provision that steel contracted for on a quarterly basis must be accepted in monthly averages of the entire tonnage. Even with this weapon to hold down masked third quarter buying at old prices and the resulting top-heavy takings of steel in June, producers are fearful lest the bulk of the year's steel demand will be massed in the current quarter at old prices. To many of them this will mean out-and-out losses because of sharply higher labor costs.

On the part of the large automotive consumers it is said there is little disposition to engage in any sort of speculative buying. Stocks in automotive consumers' hands at the moment are subnormally light, and will be added to in a routine way from now on. There is little likelihood of the large automotive users changing their policy of buying steel with regard solely to their own production schedules. On the basis of the week's operating figure of 47.4 per

cent of capacity issued by the American Iron and Steel Institute, a 10 per cent gain over the rate during the first week in April has been attained, and this is expected to be doubled next week. Finishing mills, catering to automotive consumers, have been able to step up their operations this week to an even more marked extent.

Pig Iron—With a rise of \$1 per ton in the price of foundry and malleable irons filed to apply to Chicago and Cleveland the market generally is expected to be uniformly on the higher basis by the end of the week. With these advances becoming effective next week, automotive foundries covered their second quarter needs to a large extent this week.

Aluminum—Steady and fairly active.

Copper—The Code is expected to be signed before the end of the week, and in anticipation of this producers early in the week advanced their quotation $\frac{1}{8}$ ¢ to a basis of 8 $\frac{1}{2}$ ¢, delivered Connecticut Valley. The market also benefited from higher prices abroad.

Tin—While Straits tin opened slightly lower this week at 56 $\frac{3}{4}$ ¢, compared with 56 $\frac{1}{2}$ ¢ at the close on Friday, misgivings are beginning to make themselves felt regarding the future course of prices. The International Tin Committee has recommended to the signatory governments of the Tin Agreement establishment of a "buffer pool" to forestall runaway market conditions. Sixty-cent tin would be nothing short of a calamity for the automotive industry and would seriously affect the long-term interest of producers.

Lead—The leading interest has made two successive advances in the contract price, first bringing the price from 4 to 4.10¢ and later to 4.25¢, New York, an aggregate advance of $\frac{1}{4}$ ¢.

Zinc—Slightly higher and firm.

Net Profit Reported by Aluminum Industries

CINCINNATI — Aluminum Industries report a net profit for 1933 of \$100,207 after charges and taxes. This is a gain of slightly less than \$30,000 over 1932 earnings of \$70,889.

General Motors Sales in March Exceed All Monthly Totals Since May, 1931

NEW YORK—With world sales to dealers of 153,250 in March, General Motors reached the highest volume level it has attained since May, 1931. The total represents a gain of more than 50 per cent over February and of 164 per cent of March a year ago. World sales in the first quarter aggregated 316,604 against 199,749 in 1933 and 197,256 in 1932.

Domestic retail deliveries totaled 98,174, a gain of 67 per cent over February and of 107 per cent over March, 1932. The total was the largest for March since 1931, and with the exception of June last year, the biggest for any month since June, 1931. First quarter domestic retail sales amounted to 180,523, a gain of 28 per cent over the corresponding period in 1933.

Sales of U. S. dealers were 119,858 in

March which represented an increase of 46 per cent over February and of 166 per cent over March, 1933. The first quarter total of sales to domestic dealers was 248,270, a gain of 48 per cent over 1933.

Stocks of cars in the hands of U. S. dealers increased 21,684 in March, and 67,747 in the first quarter, as compared with 27,215 in the first quarter of last year.

March sales to dealers outside of the United States were nearly triple last year, this year's business amounting to 33,392 as contrasted with 12,920 a year ago. In the first quarter, foreign business was more than double last year, the respective totals being 68,334 and 32,165.

A summary of the corporation's sales follows:

	Mar., 1934	Feb., 1934	Mar., 1933	First Quarter 1934	First Quarter 1933
Sales to U. S. Consumers.....	98,174	58,911	47,436	180,523	140,369
Sales to U. S. Dealers.....	119,858	82,222	45,098	248,270	167,584
World Sales to Dealers.....	153,250	100,848	58,018	316,604	199,749

March Retail Car Sales Biggest Since May, 1931

**Gain 140% over February
and 180% over Last March**

PHILADELPHIA — New passenger car registrations for March amounted to 220,000 as compared with 78,741 a year ago and approximately 93,000 during February, 1934, according to estimates based on returns from six states. This estimate indicates an increase over March, 1933, of about 180 per cent, and over February of this year of approximately 140 per cent.

On the basis of the estimate, March registrations were the largest for that month since 1930, and the greatest for any month since May, 1931.

On the basis of the returns from these six states, Chevrolet will lead the field with 66,000, Ford will be second with 58,000 and Plymouth third with 40,400 units registered. Chevrolet will show a gain of 148 per cent over March, 1933, Ford an increase of 266 per cent, and Plymouth a gain of 307 per cent.

J. N. Willys Buys Receivers' Paper

TOLEDO—A batch of \$175,000 of receivership certificates, first of the total of \$750,000 authorized for current operations of Willys-Overland, was signed Tuesday by Federal Judge George P. Hahn. David R. Wilson, receiver, said all of the materials for 7500 cars has now been purchased and the manufacturing program is well under way.

Of the first certificates John N. Willys and Toledo Trust Co. each took \$50,000 and Citizens Trust Co., Commerce Guardian Bank and United States Advertising Corporation each took \$25,000.

Edgar Davies, president of Willys Distributors, Inc., Los Angeles, has announced that 2700 of the cars are under order for dealers in California.

Pittsburgh Section to Hear C. E. Wilson on April 19

PITTSBURGH—C. E. Wilson, General Motors vice-president in charge of accessories divisions, will address a luncheon meeting of the local section of the S.A.E. on April 19. Members of the Pittsburgh Chamber of Commerce have been invited to attend and the meeting will be held in its auditorium. John S. Fisher, president of the Chamber and ex-governor of Pennsylvania will make the introductory remarks.

FWD Introduces New Truck

CLINTONVILLE, WIS. — Four Wheel Drive Auto Co. has announced a new 1½-ton FWD truck model powered with an 84 hp. engine and capable of attaining a speed of 47 m.p.h. fully loaded.

McCarl OK's Order Calling for Compliance Certificate

WASHINGTON—Controller-General McCarl will not interfere with the administration's plan to use government contracts as an NRA enforcement weapon by requiring bidders to certify compliance with the codes to which they are subject. This was made clear this week when the Controller-General upheld the President's recent executive order requiring bidders to furnish certificates of compliance.

The issue was first raised last year when the Controller-General blocked an effort by General Johnson to bar a local Ford dealer from getting a contract for trucks on which he was a low bidder, on the ground that the Ford Motor Co. had not assented to the automobile code. Mr. McCarl ruled then that the law required that the business go to the lowest bidder.

Marmon-Herrington Adds Seven New Truck Models

INDIANAPOLIS, IND.—Seven new models have been added to the line of all-wheel-drive trucks produced by the Marmon-Herrington company of this city, two of them propelled by gasoline engines and the remaining five by Diesel engines. The new gasoline-powered units are a four-wheel drive of 20 tons and a six-wheel drive of 35 tons capacity. The Diesel models include a four-wheel drive 5-5½ tonner, a four-wheel drive 6-tonner, a four-wheel drive 20-ton unit, a six-wheel-drive 6-ton unit and a six-wheel drive 35-ton unit.

The full line now consists of five series of all-wheel drive trucks and truck tractors with a total of twenty-eight different models ranging in capacity from 1½ tons up.

R. E. Cole Joins Hupp

DETROIT—R. E. Cole, one time chief engineer of Dodge, Durant and Rockne, has joined the Hupp engineering staff. Recently Mr. Cole has been doing special design work in the name of Cole Engineering Co. in Detroit. It will be remembered that after he left Durant he organized Cole Engineering and designed a light car, some of the details of which were incorporated in the Rockne 65.

New Bendix Products Coming

SOUTH BEND—Bendix Aviation will introduce important new automotive and aircraft products this year, Vincent Bendix, president, told stockholders attending the corporation's annual meeting this week. All officers and directors were reelected. Victor W. Kliesrath, president of Bragg-Kliesrath, was elected a vice-president of the parent corporation.

In Newly Created AC Job



L. Clifford Goad

Who has been appointed general manager of manufacturing. He has been associated with the General Motors Corporation for the last 11 years

White's Loss Decreases

CLEVELAND—The White Motor Company and subsidiaries report for 1933 a net loss of \$3,168,589, compared with \$3,618,762 in the previous year.

Libbey-Owens-Ford Glass Net Earnings \$1,370,998

TOLEDO—Libbey-Owens-Ford Glass Company reports a net profit of \$1,370,998 for the quarter ended March 31. For the same quarter last year the net profit was \$623,103.

The current assets of the company are reported as \$16,783,850 as of December 31. Of this amount \$5,749,752 is in cash; \$86,495 in marketable securities, and \$2,966,871 in accounts and notes receivable.

Continued Attacks on Wagner Bill Make Its Passage by Congress Very Doubtful

WASHINGTON—Whether the Wagner Labor Disputes Bill will pass the session of Congress in any form, is still an open question with the answer probably depending largely on what the President does. Lacking his support, its enactment is regarded as extremely doubtful.

However, it is felt here that Presidential support of the bill in modified form is a distinct possibility. It is believed that Mr. Roosevelt's attitude on the measure closely parallels the views expressed by General Johnson in a letter written this week to Senator Wagner. Although Senator Wagner interpreted the letter as an endorsement

Receivers' Report Shows Studebaker Makes Profit

SOUTH BEND—Studebaker receivers report a profit on operations of \$54,619 after deducting expenses, replacement and depreciation of \$79,849, and crediting interest received of \$63,328 for the period March 19 to Dec. 31, 1933. Prior to the former date on which the receivers were appointed, the company lost \$4,930,926.

Sales before March 19 amounted to \$6,269,544 and for the balance of the year, \$29,697,728. Current assets on Dec. 31 last, were \$9,589,169 against current liabilities of \$3,831,959, the receivers report.

Stockholders are reported to have voted 91 per cent against consolidation with the White Company.

Atlanta Chevrolet Dispute Before Auto Labor Board

WASHINGTON—A dispute of the Chevrolet plant in Atlanta, which had been brought before the Atlanta Regional Labor Board, was referred by the National Labor Board to the Labor Board for the Automobile Industry established under the terms of the recent settlement. The chairman of the Automobile Labor Board notified the National Labor Board of acceptance of jurisdiction in the dispute.

The question of jurisdiction had caused a threat of a strike. The National Labor Board obtained consent of the employees to the postponement of any strike for a week.

Stewart-Warner Corp. Elects 3 New Officials

Stewart-Warner Corporation has announced the election of three new officials: F. A. Ross, vice-president in charge of manufacturing; T. T. Sullivan, secretary and treasurer, and E. H. Farrell, controller.

of his bill, the most that can be said for it is that it gave a qualified approval.

The General's letter expressed approval of the bill insofar as it provided for a National Labor Board but, by implication, criticized the sections of the bill which were intended to destroy the company union. "In my opinion," he said, "the government should not favor any particular labor organization. . . . On the other hand, while a company might initiate a form of company union, its activities should stop there. It should neither finance, foster, nor direct what the men do."

Cord Sponsored Co. To Bid For Air Mail

Aviation Interests
Suggest Regulatory
Body Similar To ICC

CHICAGO—The Cord Corporation has announced the formation of a new aviation operating company to supplant American Airways. This new company will be amply financed and have personnel and equipment rendering it eligible to bid for air mail contracts.

According to plans contained in the announcement the Cord Corporation, which owns American Airways and its parent company, the Aviation Corporation, will finance the new venture as a separate entity.

Coincident with the Cord statement aviation interests associated with General Motors have advocated the formation of a Federal regulatory body similar to the Interstate Commerce Commission as a possible solution to the air mail quandary.

The suggestion is contained in a letter from Ernest R. Breech, president of North American Aviation, to stockholders in many aviation enterprises, including General Aviation Corporation.

Under the plan advocated by Mr. Breech certificates of convenience and necessity would at once be issued to all air lines which were in operation when the air mail contracts were canceled.

Rates of payment for carrying the mail would be fixed by the proposed regulatory board.

The Breech letter closed by saying the air transport industry in this country could never enjoy a full measure of natural growth as long as it is subject to the political policies of the Postoffice Department.

Continental-Diamond's Net Loss Decreased

NEWARK, DEL.—For the fiscal year ending Dec. 31, Continental-Diamond Fibre Company reports a net loss of \$176,130, against \$664,075 for 1932. This is a reduction of \$487,945.

The asset account shows \$876,683 cash for 1933 as compared with \$773,522 for the previous year; \$100,900 in United States securities; New York State notes, \$100,068, notes and accounts receivable, \$514,204, and inventories, \$1,713,687.

Airworthiness Requirements to Be Subject of Conference

WASHINGTON—A conference on proposed amendments to Department of Commerce airworthiness requirements for engines and propellers at which manufacturers will be given an opportunity to present comments and suggestions has been called by the Aeronautics Branch for April 25, at the Commerce Department in Washington.

Senate Throws Out Brain Trusts' Exchange Bill

Measure Is Being Entirely
Rewritten to Meet Protests
Registered by Business Men

WASHINGTON—Revision of Sections 11, 12, 13, 15 and 17 of the Stock Exchange Regulation Bill, to which the N.A.C.C. and other industrial interests have objected strenuously, is next on the agenda of the Senate Committee on Banking and Currency which already has completely rewritten the sections of the bill affecting security and banking interests.

These sections of the measure, which is undergoing a thorough over-hauling, concern the registration of securities; reports by corporations as to their condition; proxies; conduct of directors and principal stockholders, and the giving or circulation of misleading information.

After a brief debate the Senate Committee voted to refer these sections to a subcommittee of five members with Senator Fletcher, committee chairman, as chairman. Other members of the subcommittee are: Senators McAdoo and Byrnes, Democrats, and Walcott and Goldsborough, Republicans. There is a hope, but little likelihood, this subcommittee will bring in its report before the end of the current week.

The N.A.C.C. filed briefs with both Congressional Committees in which it expressed an "unalterable opposition" to "a general theory that all industry should come under government bureaucracies."

Mr. Jonker Bought Two Cars



Automotive Industries was right the first time and partially so the second time. J. J. Jonker, poor South African prospector who recently sold a 726 carat diamond he found for \$350,000, we are now informed bought both a Studebaker and a Vauxhall. In our issue of March 3, we reported the purchase of the Studebaker. This was followed with a correction to the effect that it was a Vauxhall that Mr. Jonker had purchased. The photograph shows the delivery of the new Studebaker. From left to right, the men in the picture are L. Redlich, salesman; J. J. Jonker, Jr., and Mr. Jonker, Sr.

Automotive Industries

400 Workers Walk Out At Bingham Stamping Co.

TOLEDO—About 400 workers in the Bingham Stamping Company plant here walked out on strike Thursday. The cause of the walk-out is ascribed by Thomas Ramsey, executive secretary of the United Automobile Workers Federal Labor Union, to the management's refusal to deal collectively with the workers and sign a working agreement and grant a wage increase according to an agreement reached with the sub-regional labor board last month.

Cummings Enters 2 Diesels In Indianapolis Classic

INDIANAPOLIS—Two Diesel powered cars have been entered in the annual 500-mile race here on May 30, by the Cummins-Diesel Company. Said to be the smallest Diesel racing motors ever built, one is constructed on the two-cycle principle and the other is a four-cycle. Both are supercharged. The cars are smaller, lighter and shorter than the 1931 Cummins-Diesel which finished in 13th position after a non-stop run.

April 14, 1934

Expedition of Important NRA Decisions Sought In Decentralization of Authority

WASHINGTON—The codification of industry and trade substantially completed, the National Recovery Administration Monday moved into an even more important phase—code administration—when Administrator Hugh S. Johnson delegated to chief aides both the authority and responsibility for making decisions heretofore made only by the general himself.

This was the second important move during the week to bring about a decentralization of authority within NRA's ranks in an effort to make it function more efficiently and expeditiously as business has urged that it should. The other was the order to State Directors and Code Authorities hereafter to take their non-compliance cases directly to the appropriate Federal District Attorneys.

Business men in future dealings with the Administration, NRA states, will find the route to prompt decision of their problems vastly simplified and expedited under the new set-up which vests complete authority in individuals finally to settle any question arising in their respective fields. The Industrial, Consumers and Labor Advisory Boards will continue to function as in the past.

Orders issued by the general announced the creation of new Personal and Administrative staffs—the former to consist of Colonel Robert W. Lea, Assistant Administrator for Industry; Edward F. McGrady, Assistant Administrator for Labor; Miss Frances M. Robinson, Assistant to the Administrator, and Kilbourne K. Johnston, aide to the Administrator.

The Administrative Staff members and their responsibilities under the new organization plan are:

ADMINISTRATIVE OFFICER — Colonel G. A. Lynch, who will act on all matters not otherwise assigned which do not require the Administrator's personal attention, including final approval in the name of the Administrator of codes and other documents requiring the Administrator's action and including all matters of office organization and management.

REVIEW OFFICER—Alvin Brown, who will review all documents for the action of the Administrator and all final decisions of Division heads and Staff Members for consistency with approved policy and will forward them with his comments to the appropriate Staff Member or Division head.

SPECIAL ASSISTANT ADMINISTRATOR—W. A. Harriman, who will have supervision over the selection and appointment of the executive personnel of NRA, Administration Members and the various advisers thereto, and will insure that the activities of the industrial divisions, in so far as they do not relate to the assignments expressly delegated to other Staff Members, are coordinated.

GENERAL COUNSEL — Donald Richberg, who, in addition to his duties

as personal legal adviser to the Administrator, will have supervision over all legal policies throughout the organization.

ECONOMIC ADVISER—Leon Henderson, who, in addition to his duties as personal adviser to the Administrator, will have supervision over all economic policies throughout the organization.

An Assistant Administrator for Pol-

icy with supervision over policies governing employment, trade practice and code authority and classification problems is still to be named as is a Director of Enforcement who will have supervision over all policies governing compliance, enforcement and litigation (the latter in conjunction with the General Counsel).

George Buckley, at present Administrator of Division 7, has been added to the Administrative Staff. Mr. Buckley will continue his present duties and in addition will cooperate with William V. Lawson, in charge of the Administration Press Section.

Business in Brief

Written by the Guaranty Trust Co., New York, exclusively for Automotive Industries

Business in Brief

Business in general continued to make a good showing last week, although there was a slight slowing up in the rate of the upward movement. Wage increases throughout the country have added a great deal of encouragement to the trade outlook. Both retail and wholesale trade last week was at a good level, while the Easter buying this year was the best in several years. There were signs of improvement in the heavy industries as a whole, despite a slight decline in steel operations.

Car Loadings

Railway freight loadings during the week ended March 31 amounted to 608,443 cars, which marks a decline of only 19 cars below those during the preceding week, but an increase of 110,087 cars above those a year ago and an increase of 63,482 cars above those two years ago.

Electric Output Greater

Production of electricity by the electric light and power industry in the United States during the week ended March 31 reached the highest level since the week ended Dec. 19, 1931. The current figure shows an increase of 18.8 per cent above that in the corresponding period last year.

Lumber Production Up

Production of lumber during the five weeks ended March 31 showed an increase of 73 per cent above that in the corresponding period last year. There were increases of

30 per cent in shipments and of 23 per cent in orders.

Farm Prices Increase 52%

The farm price index compiled by the Department of Agriculture, with the 1909-14 average equal to 100, stood at 76 on March 15, as against 76 a month earlier and 50 a year earlier. The index of prices that farmers pay for commodities was 120 on March 15, as against 119 a month earlier and 100 a year earlier. The index numbers show that the prices farmers receive for their products have risen 52 per cent during the last 12 months, whereas the prices they pay have increased only 20 per cent.

Oil Production Slackens

Average daily crude oil production for the week ended March 31 amounted to 2,324,850 barrels, as against 2,389,800 barrels for the preceding week and 2,239,750 barrels a year ago.

Fisher's Index

Professor Fisher's index of wholesale commodity prices during the week ended April 7 stood at 73.5, as against 74.0 the week before and 74.1 two weeks before.

Federal Reserve Statement

The consolidated statement of the Federal Reserve banks for the week ended March 28 showed an increase of \$2,000,000 in holdings of discounted bills and a decrease of \$4,000,000 in holdings of bills bought in the open market. Holdings of Government securities remained unchanged.

NRA Orders Check-up On Price Chiselers

**Dexter Keezer To Make
Investigation Resulting
From Public Criticism**

WASHINGTON—Price chiselers are to be put on the spot by NRA, according to instructions issued this week.

Frank C. Walker, National Emergency Council Director, has announced an attempt to check on prices will be made through the setting up of 120 volunteer experimental consumer councils under the auspices of NEC and under direct charge of Mrs. Mary E. Rumsey, chairman of the Consumers' Advisory Board of NRA. Heading the staff which will conduct this investigation will be Dexter M. Keezer of the Consumers' Advisory Board.

This move against price cutting or boosting is said to be the result of a discernibly increasing discontent on the part of the public with the present price situation. It has been reflected through the Consumers' Advisory Board and regardless of its merits, criticism has been directed toward General Johnson with growing force for his alleged indifference to the consumers' interest. Dr. Keezer himself has criticized the upward price trend and has shared prominently with consumers' representatives both in the NRA and the AAA in attacking price fixing codes.

The general impression here is that the consumer councils will concern themselves chiefly with retail prices.

Car Mileage Up 10%

NEW YORK—The public went about 10 per cent more miles sitting down in automobiles in January, 1934, than in the same month a year ago, according to gasoline consumption figures compiled by the American Petroleum Institute. Consumption in January this year amounted to 1,160,952,000 gal. as compared with 1,050,397,000 in January, 1933, and 1,169,332,000 in December. The increase was distributed as only California and Ohio failed to show gains in consumption over January last year.

Meanwhile, however, it is understood that the Consumers' Advisory Board will keep a check on manufacturers' prices.

The price question is complicated and rife with cross currents. Now it appears that the general policy of NRA will be an effort to prevent what industry considers necessary price stabilization.

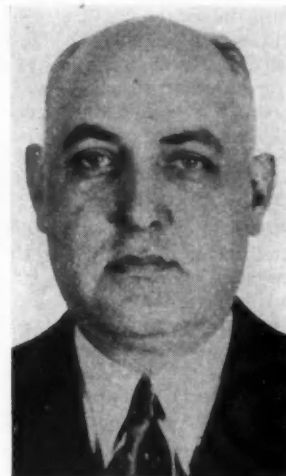
Robert S. Preble

RACINE, WIS.—Robert S. Preble, vice-president of the Walker Manufacturing Co. and its subsidiary, Ajax Auto Parts Co., and general sales representative at Detroit for the past eight years, died April 4 at his home in Birmingham, Mich. Interment was at Boston.

Appoint B. H. Newell Buick Foundry Head

FLINT—Harlow H. Curtice, president and general manager of the Buick Motor Company, has announced the appointment of B. H. Newell as general superintendent of the Buick gray iron foundry.

In the early days of the industry Mr.



Newell was for 10 years superintendent of Dodge Brothers foundry. Later he served for three years as foundry superintendent for the Oakland Motor Car Company and for the past 15 months has been assistant to the foundry manager of the Cadillac.

Exports and Imports for the Automotive Industry for February and Two Months Ended February, 1934-33

	February 1934		1933		Two Months Ended February 1934		1933	
	Number	Value	Number	Value	Number	Value	Number	Value
Automobiles, parts and accessories.....	....	\$13,179,524	....	\$6,347,289	....	\$24,021,275	....	\$12,886,630
Motor trucks, buses and chassis (total).....	6,039	2,757,590	3,136	1,279,854	13,612	6,061,987	6,220	2,435,771
Under one ton.....	636	183,813	213	56,137	1,171	330,413	554	136,115
One and up to 1½ tons.....	4,722	1,945,194	2,582	892,632	11,061	4,430,558	5,109	1,781,010
Over 1½ tons to 2½ tons.....	522	414,174	263	197,684	1,075	912,924	411	314,548
Over 2½ tons.....	151	211,949	48	74,135	277	378,467	92	136,637
PASSENGER CARS								
Passenger cars and chassis.....	8,872	5,006,128	5,521	2,831,436	12,557	7,483,941	12,580	5,979,779
Low price range \$850 inclusive.....	8,181	4,205,278	5,024	2,208,270	11,230	5,931,245	11,653	4,877,169
Medium price range over \$850 to \$1,200.....	391	382,329	252	248,612	748	725,709	514	498,578
\$1,200 to \$2,000.....	165	265,019	196	325,642	295	470,896	296	463,166
Over \$2,000.....	44	120,901	19	41,332	109	291,728	54	123,094
PARTS, etc.								
Parts except engines and tires.....	....	3,183,904	....	984,026	....	6,038,426	....	1,990,762
Automobile unit assemblies.....	....	1,616,430	....	829,281	....	3,209,675	....	1,621,414
Automobile parts for replacement (n.e.s.).....	....	176,586	....	87,979	....	351,770	....	192,116
Automobile accessories (n.e.s.).....	....	130,529	....	46,548	....	263,275	....	120,382
Automobile service appliances.....	26	459,356	41	493,748	46	632,496	96	1,095,387
Airplanes, seaplanes and other aircraft.....	....	345,599	....	109,057	....	512,289	....	209,052
Parts of airplanes, except engines and tires..	....	....	....	....	....	....	....	....
INTERNAL COMBUSTION ENGINES								
Stationary and Portable:								
Diesel and semi-Diesel.....	7	23,277	....	....	31	72,710	1	5,440
Other stationary and portable:								
Not over 10 hp.....	306	18,797	250	14,605	528	40,925	483	30,096
Over 10 hp.....	68	45,185	22	18,834	120	120,876	76	35,865
Automobile engines for:								
Motor trucks and buses.....	141	14,528	67	11,599	333	47,860	181	37,856
Passenger cars.....	1,854	110,358	1,318	91,659	3,551	208,571	2,069	158,041
Aircraft.....	118	414,580	34	150,250	190	749,124	608	235,650
Accessories and parts (carburetors).....	....	93,225	....	71,992	....	183,285	....	143,280
IMPORTS								
Automobile and chassis (dutiable).....	36	28,968	30	26,431	76	36,666	71	42,842
Other vehicles and parts for them (dutiable)	....	2,083	....	4,075	....	4,802	....	6,869

Labor Factions Brew Trouble

(Continued from page 459)

the Motor Products situation, the service of Edward F. McGrady, assistant to NRA administrator Hugh Johnson, proved exceedingly valuable. His appeals to a meeting of Motor Products Workers late Monday to accept the strike settlement were probably largely influential in achieving the result, as were the appeals along the same line of Richard L. Byrd of the Labor Board.

Feeling however ran high and at one time workers threatened to get out of complete control of the A. F. of L. which had sponsored the strike of the platers which shut down the entire Motor Products plant. Rejection of the first strike settlement was accompanied by denunciations of the Motor Products management. Officers of the local who had effected the original settlement were rejected by the workers and new officers were elected. As a matter of fact, however, the final settlement did not differ materially from the original agreement. Major achievements by Labor were the following:

1. 10 per cent flat increase in wages (20 per cent demanded).
2. Increase in minimum wage rate for men from 40 to 50 cents per hour.
3. Increase in minimum for women from 35 to 44 cents per hour.
4. Agreement by Motor Products not to replace men with women in the shop unless such men were given other satisfactory employment.
5. Right accorded to shop "stewards" to check over time study on piece rates.

In addition Labor "agreed" not to call any further strikes in the plant without submitting its claims or demands to the labor board. Matthew Smith agreed to let some two hundred Motor Products tool and die men return to work at Motor Products (they were not among the strikers but were affected by the shut-down). At Hudson, however, he asked tool and die men to refrain from going back to work when Hudson resumed work Tuesday and Wednesday.

Strikers threatened by the M.E.S.A. unless satisfactory settlement is made include 82 jobbing tool and die shops in this area; also Ternstedt Mfg., Fisher Body, Detroit, and Midland Steel Products Detroit plant. A new development arose Tuesday when M.E.S.A. submitted lists of its membership to Ternstedt and Fisher. This is the first time that such lists have been submitted directly to manufacturers by a major labor organization.

In the discrimination cases brought before the Automotive Labor Board, however, lists of members in the A. F. of L. have been furnished manufacturers involved in order to enable them to check their own records, the labor board passing on copies of such lists submitted to it by the A. F. of L.

Every hope exists at present that the strike situation will clear up somewhat during the next few days, but it is not likely that any lasting peace will be achieved until some basis of mutual understanding is arrived at between rival labor organizations. The difficulties involved are well illustrated by comments of Matthew Smith.

"The A. F. of L. leaders have betrayed labor," Smith declared. "It is time that labor recognize the true value of such an organization. The A. F. of L. is a decaying organization. Sooner or later its leaders will hang themselves."

End Campbell, Wyant Strike

MUSKEGON—Two thousand employees of the Campbell, Wyant & Cannon Foundry returned to work Wednesday following satisfactory settlement of a strike which began last Monday.

The basis of the settlement was not disclosed by company officials but workers' representative said it involved an increase of the base wage rate from 44 cents to 50 cents per hour.

CALENDAR OF COMING EVENTS

SHOWS

American Transit Company, Cleveland, Ohio	Sept. 22-27
Cleveland (Automotive Service Industries)	Nov. 19-23

MEETINGS

SAE Tractor Meeting, Milwaukee,	April 18-19
American Welding Society, New York City	April 26
U. S. Chamber of Commerce, Washington	May 1-4
National Battery Mfrs. Assoc., Cleveland, O. (Annual)	May 16-18
American Petroleum Institute, Pittsburgh	May 22-24
S.A.E. Summer Meeting, Saranac Lake, N. Y.	June 17-22
American Society for Testing Materials, Atlantic City, N. J.	June 25-29
American Chemical Society, Cleveland, Ohio	Sept. 10-14
American Welding Society, New York City	Oct. 1-5

ANNUAL MEETINGS

Natl. Automobile Chamber of Commerce, New York, N. Y.	June 7
Natl. Safety Council, Cleveland, O.	Oct. 1-5

CONVENTIONS

American Gear Mfg. Assoc., Wilkesburg, Pa. (Annual)	May 3-4
American Society for Metals, New York City	Oct. 1-5
International Foundry Congress, Philadelphia	Oct. 22-26
American Foundrymen's Assoc., Philadelphia	Oct. 22-26

EXPOSITION

Natl. Exposition of Power & Mechanical Engineering (Biennial) New York, N. Y.	Dec. 3-8
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Olds and Scott Lead Opposing Groups

(Continued from page 466)

said "It is hard to believe that Mr. Scott, the previous head of Reo, would try to shift his failures in management to my shoulders or that any person posing as a friend of Reo would resort to such misleading statements as contained in that circular letter."

In its letter to stockholders, the New Management Committee pointed out that the unsatisfactory showing of which the "Independent" group complained occurred while Mr. Scott was general manager and responsible for the direction of the company's affairs. Continuing the letter says that Mr. Olds was convinced that Mr. Scott was not keeping abreast of the times and that as a result he reduced his stock holdings.

Nash Officials Meet Labor Union Leaders

(Continued from page 466)

1—The company would put strikers back to work without discrimination as rapidly as production could be stepped up and would have them all working in two weeks.

2—The company agreed to bargain collectively with representatives freely chosen by those employees for whom they are to act.

3—In laying off and rehiring workers, married men with families or other dependents would receive first consideration and then seniority, merit and efficiency.

4—All Racine workers would receive a 10 per cent increase over pay at the time of the strike. Wages at the Kenosha plant would be adjusted to the new Racine level. At the Seaman plant, a 10 per cent increase is already effective, and adjustments in base rates and classifications would be completed as rapidly as possible.

5—Minimum earnings at all plants to be not less than 50 cents per hour for male piece work or group operator, or sweeper, chip hauler or stock hauler, and not less than 45 cents per hour for female piece work or group operator.

Schedules Total 395,000 Units for Month of April

(Continued from page 467)

pared with 37,967 orders to the same date of last year. These orders include domestic, export and Canadian.

A heavy influx of orders has forced Graham-Paige to alter their production schedule for April. The revised schedule calls for 3000 units this month and the indications are the expanded schedule will leave accumulated orders in excess of production at the end of the month.

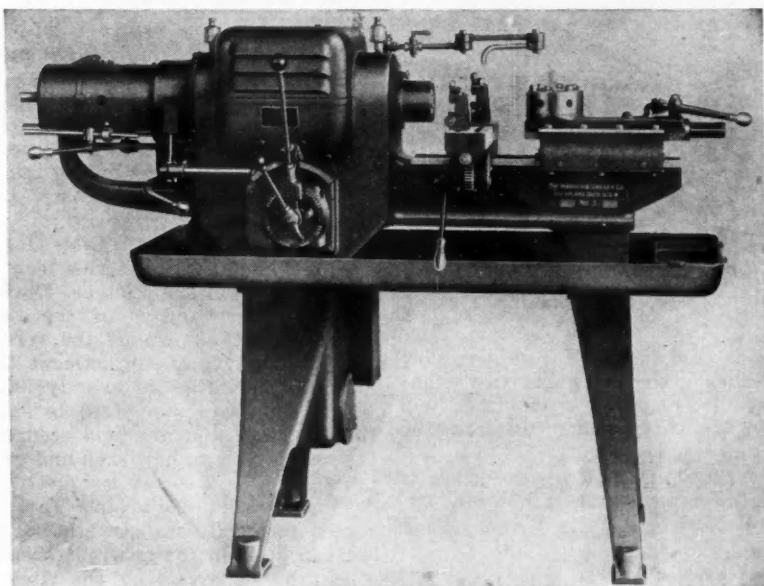
Studebaker had on record 5754 orders for passenger cars and trucks at the first of the month.

NEW DEVELOPMENTS

Automotive Parts, Accessories and Production Tools

Built-In Motor And New Bar Feed

A high speed turret lathe, with motor built into the head, and new bar feed, has recently been brought out by the Warner & Swasey Co., Cleveland, Ohio. It is designed for higher cutting speeds, to suit carbide or diamond cutting tools and is particularly adapted to small diameter work and non-ferrous materials, which require high speeds.



Warner & Swasey turret lathe with bar feed

The machine incorporates a completely self-contained A.C. motor drive; the rotor being mounted directly on the spindle, while the stator is in the head housing. Four speeds are available in either direction: 600, 1200, 1800 and 3600 r.p.m. All gearing and belts are eliminated, resulting in a simple construction. Overheating is prevented by fan blades, rigidly attached to the rotor which circulate a high velocity air draft through cored passages around spindle bearings and motor windings.

Two levers responding to finger tip pressure control the spindle electrically through a drum type controller and automatic relays. The shorter lever selects the four spindle speeds. The longer lever stops, starts and reverses. The spindle can be quickly reversed without damage to the motor, and the number of permissible reversals per minute is ample. A large band brake is actuated by the longer lever, in the

neutral position, preventing rotation when attaching chucks, loading work, etc.

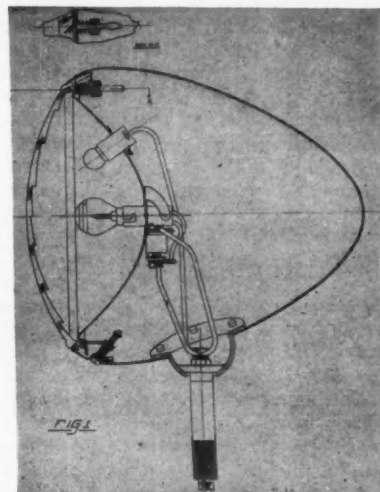
High speeds made possible by the new lathe have necessitated a new combination of bar feed elements. For this purpose a friction finger bar feed has been developed (also adaptable for other models of high speed lathes), holding bars in a concentric position in the spindle to prevent vibration, and enclosing them for their full length in a protecting tube for safety.

The friction feed finger lies immediately behind the collet so that bar stock can be used up to the last end. The finger is mounted on a feed tube, which, at the rear of the spindle, is reciprocated by a fork. Length of feed is controlled by a quickly set collar.

Control-Beam Headlamps

A notable innovation in the field of automobile headlighting this year is the Control-Beam headlamp manufactured by the Corcoran-Brown Lamp Co. of Cincinnati, Ohio, by means of which six different beams can be obtained at will. A magnetic control mechanism secured to the rear of the reflector permits the socket holding the bulb to be swung around a transverse horizontal axis into three different posi-

tions, moving the filaments vertically relative to the axis of the reflector, which accounts for three of the beams. This magnetic control is operated by means of a switch conveniently located on the instrument panel. In addition, each bulb has two filaments, located symmetrically on opposite sides of a



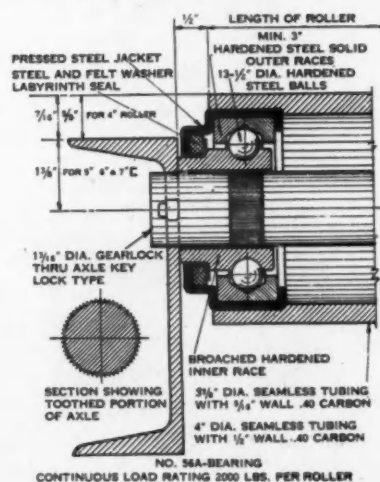
Section through axis of Control-Beam headlamp

vertical plane through the reflector axis. When both filaments are lit, the beam of the headlamp evidently is symmetrical in a horizontal plane. By means of a foot switch, the filament to the right of the reflector axis can be cut out of circuit while the other is lit, thereby producing a beam deviating to the right from the axis of the reflector. One-filament and two-filament operation combined with the three vertical positions of the bulb gives six different beams.

A section through the headlamp, showing the solenoid by which the position of the bulb is controlled, is reproduced herewith.

Mathews Patents Ball Bearing Roller

Mathews Conveyor Co., Ellwood City, Pa., has been granted basic patents on



Heavy duty roller conveyors patented by Mathews

the design of heavy duty roller conveyors which incorporate special detachable ball bearings and are protected against dirt by a labyrinth seal.

The design features the knurled, "gear lock" axle mounting and the up-set key which fits in a slot in the conveyor rail, holding the axle stationary, and on a common level during the life of the unit. The gear lock holds the bearing inner race stationary thus preventing wear between the bearing and axle.

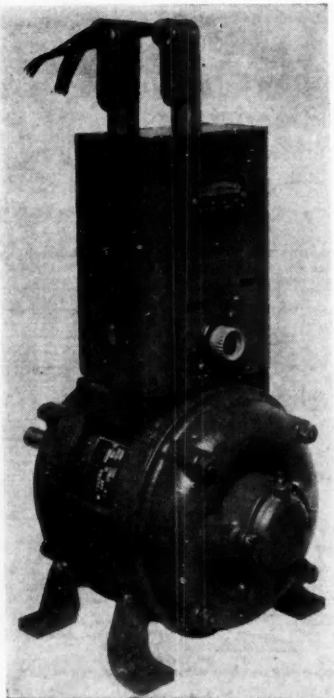
Another important feature for many installations is the use of a labyrinth seal to keep out dirt, grit, and dust.

New Motor Is Self-Protected

A self-protected motor which cannot burn out is announced by The Lincoln Electric Company, Cleveland, Ohio. The motor has a protective device built into the windings. Should it be stalled through overloading, should it become excessively hot due to poor ventilation, should it run on single phase, or if for any other reason the motor is blocked the protector shuts off the current and the motor is saved from damage.

It is said that with a self-protected motor, less supervision of motors is necessary, repair bills are cut, and frequently smaller size motors can be used. Where large motors are necessary to take care of only infrequent peak loads, a small size self-protected motor may be employed. At the high peak loads the protector will automatically disconnect the motor.

A.C. induction self-protected Lincoln motors are built in sizes from $\frac{1}{2}$ to 30 hp., for either two or three phase and standard commercial cycles and voltages. Controls are mounted on the motors.



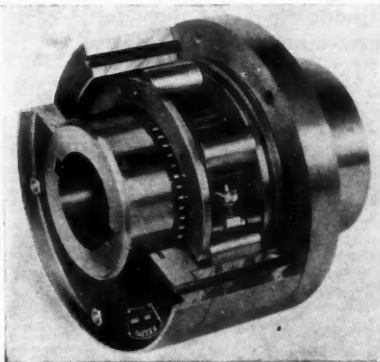
Lincoln self-protected motor

NEW DEVELOPMENTS

Automotive Parts, Accessories and Production Tools

Free-Wheeling for Plant Drives

The Morse Chain Co., Ithaca, N. Y., div. of Borg-Warner Corp., has just developed the Morse-Kelpo Clutch for use as coupling on heavy drives. It is in effect a positively actuated clutch free-wheeling in one direction, driving in the other. Operating with no back



Morse, Kelpo clutch

lash it is said to be ideal as a ratchet drive when used to connect two prime movers to a common load either will pull the load but neither can drive the other.

An exclusive feature of the device is automatic compensation for wear.

New Landis Collapsible Taps

The Landis Machine Company, Waynesboro, Pa., has recently announced a new line of collapsible taps to supersede the Victor Collapsible Taps formerly manufactured by the Victor Plant of this company.

The new taps are made in two types: the Landis Style LT, a collapsible tap

for either straight or taper tapping, and the Landis Style LM Receding Chaser Collapsible Tap for taper tapping. The taps can be used either as stationary or rotary taps.

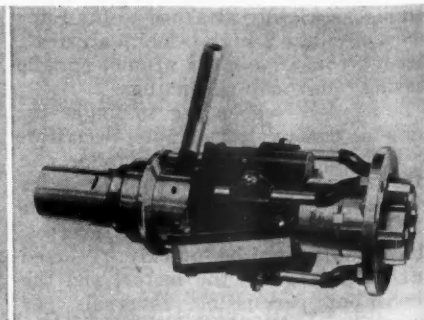
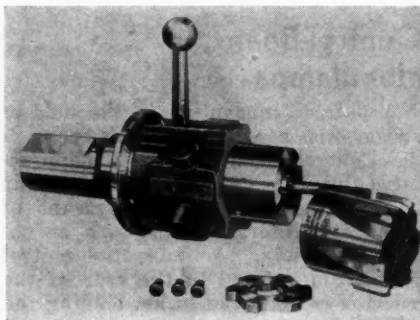
The feature of these taps is a design, on which patents have been granted, whereby the tap consists of two units; a tap body containing the operating mechanisms, and a tap head in which the chasers are supported. This design permits the use of one tap body to cover a wide diametrical range by the application of tap heads of various sizes. In addition, the same tap body may be used for either right or left hand tapping, providing right and left hand tap heads are employed.

The collapsing mechanism is positive in its action both with respect to locking the chasers in cutting position in its collapsing action. The trip is adjustable for various thread lengths.

Tap heads are adjustable for size through an adjusting screw located in the front end of the plunger. The screw is self-locking and is of the ratchet type so that a turn of the screw of one notch gives an adjustment to the chasers amounting to exactly .001 in. The chasers are supported in slots in the tap head and are held securely in tapered seats in a hardened and ground plunger.

The Style LT Collapsible Tap is designed primarily for straight tapping, but can be used for tapered threads of a length not exceeding the American Tapered Pipe Standards. Style LT Taps are made in five sizes which, when equipped with the proper tap heads, cover a combined range from $1\frac{1}{4}$ in. to $13\frac{1}{4}$ in. inclusive.

The Style LM Receding Chaser Collapsible Tap is designed for tapping tapered threads. The receding chaser action minimizes cutting strains on this class of work.



Landis collapsible taps